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Editor :

SUTINDER SINGH

Providing for Tertiary Education – the future challenge

K. K. Bajaj*

A spate of critical reactions of reasonably high competence from educationists and politicians alike against the depleting availability of resources, in the recent months, has shown the nation's concern for education as never before. It is now being increasingly acknowledged that the quality and social accountability of higher education require to be seriously addressed and reviewed in the context of the prevailing resource inadequacy. The enormity of the post secondary system of education in its role and relevance in the national framework is important. The role of funding agencies is the key factor which determines the direction of higher education and research in the country. India is overburdened by commitment of debt servicing, pervasive shortages of resources, and the basic endeavour has been to provide for anti-poverty measures, break the high cost syndrome and provide for numerous other social responsibility functions. It is quite natural that the whole gamut of post secondary education gets only a marginal attention even though it is the key to progress of the country. From a democratic angle of statistical interest while 83% of students in higher education are in colleges, it is only 4% of population in the age-group of 17-23 which is being enrolled in higher education and nearly 6 persons per thousand are engaged in research and development. While the future is more oriented towards research and development in developed countries, democratic aspirations of the people aspiring to seek easy higher education to reduce social distances cannot be ignored. It is not to state that education at the lower level is in any way less important.

In a situation of financial restraints it becomes necessary to instil confidence in the minds of the public that every bit of scarce resources that is allotted to the post secondary institutions is effectively used by them in pursuing their academic and national goals. These institutions usually complain that either they are starved of funds on account of political considerations or that they cannot even augment their own inadequate means out of a fear of social reaction. Howsoever important a social responsibility function they may be performing they fail to give a satisfactory explanation as to how they use their allocations other than payment of salaries to the teaching and non-teaching staff, for the promotion of national resource. Their effort to attain higher standards of teaching and research with the available academic infrastructure, is now only a notional exercise. It is now rightly felt that the main problem in university education is "the relative undervaluation of the teaching mandate" and that in this regard total recommitment is required now. The institutions simply survive as places where students flock as at social functions and at venues of pastime.

A Social Input

It is usually suggested that all higher education courses should be costed and fees be prescribed at a rate which relates to the full or the marginal cost of a student. This may look to be a purely economic design. To cost higher education in accordance with the matrix of market forces or cost of living index without correspondingly evolving and establishing appropriate objective criteria by which quality and excellence in teaching in higher education can be quantified, will make the entire argument go awry. Costed fees not related to socio-economic relativism and need for productive teaching followed by quality certified and value added products, would not be acceptable.

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Education is not an economic commodity to be given a price tag on the basis of manufacturer's input costs. It is a social input. It is a social obligation. It is a factor to promote growth and development. It calls for participation of all with a definite political initiative and support. The present uncertainty in higher education system is like a man perennially poised on high wire. Every moment is crucial both from the angle of his survival and his impact. As it does not offer lasting results, it continues to enjoy a precarious perch on national attention. Most of the universities simply survive and have not rashed because of the underlying strain of prevailing nediocrity as a common fundamental factor among all.

College and university administrators usually do not ave either the heritage or the training of economists to peak on educational finances and as such they have to ope up with national bursaries made available to ducation as an arbitrary allocation to a sector which oes not command censensus of a valid priority in naional rating as it has failed to establish the legitimacy of ts purpose. Expenditure in various other fields in the hape of subsidy in agriculture, and national renewal nput effort in industry or even towards the sustenance f sick public sector units etc., is politically and socially stifiable as a norm of democracy and for the commoneal. In the educational sector, there are a number of ompeting demands such as of administrative services, frastructure, student activities, sports, teaching, rearch etc. Invariably this diversity is common both in lleges and universities. It is usually stated that the aim f a university is to create, innovate, stimulate, preserve d disseminate ideas. These are the basic functions hich are to be provided for in a university. Such funcons cannot be conditioned or correlated to the fluctuaons of economic stresses. University is neither an dustry nor an economic entity. Its activities cannot be bjected to the constraints of market behaviour and w while it is true that more than 86 percent of the cost a university is approximately to be met by government ants. The question of financing universities has acired importance on account of the fact that they are w being seen not as purveyers of ideas but as mere rking places of youth with teachers having converted st of them into non-teaching institutions rather than ues of academic excellence. Besides this, not all the dents are able to seek access to them and at best in ir examinations they are simply grinding pass mills h many reported cases of organised copying. Quality ducation is an ever illusive ideal and any uncertainty out it makes the whole exercise of financing it itious because higher education now cannot be acted as a mission of charity and that is why endownts and donations have become a matter of history h education having eroded faith in philanthropic ivity long ago. Higher education can expect only a ance from voluntary contributions and the gap been cost of higher education and such marginal ancing continues to increase.

State Funds

The universities and colleges survive on state funds or central subsistence in the shape of Non-Plan grant, Plan grant, matching share etc. There are no uniform national norms to govern these grants as there is no uniformity in the code of establishment of these institutions of higher education and their needs. Expediency normally guides such grants to keep the system going at a manageable popular pace. At times the procedures and practices are ignored to address political requirements and exercise better control on universities and colleges. Because of a number of reasons even the marginal increase in fees, despite appreciable rise in cost of goods and services, is not allowed. To an extent universities and colleges irrespective of the mismatch of the relationship both at the academic and administrative level, continue to stammer for survival under the present system and changing political dispensations. There is no imaginative forecasting in the shape of planning which is an exercise to see the future requirements and resources. In a set up where examinations have lost their sanctity and relevance, education has only been perpetuated as a social activity with skewed distribution of opportunities in higher education. Though there has been a substantial increase in allocation by both the centre and the states in favour of higher education yet with the vast proliferation of academic slums called colleges and substandard universities the situation has not improved. The intended advancement through colleges and universities in the shape of expansion of consciousness and creative engagement with national renewal has not been possible. Simultaneously funding of higher education has drawn the debate as to how could higher education be cost effective while ensuring efficient expansion. The focus has been on irrelevant spendings. The colleges and universities have contributed to a dysfunctional expenditure culture in their functioning. With them the statement of aims never gets established, let alone the funding methodologies.

While expenditure has gone up on almost every item or service in these institutions neither has the point of accountability improved nor has there been any visible year on year change in curricula to make the same relevant and cost effective to social needs. This speaks of their deep apathy towards the system. There has been no mechanism to reach out to the grassroots and to address the needs of the community. Many institutions have ceased to be enterprises of academic activity and the community at large. Universities focus on research with most of them having no research reputation or research industry nexus. There are no research conscious departments and even the emphasis on teaching and extracurricular activities has been given a go by. There may not be any comparable devotion to research but teaching may be excellent. That too does not seem to be the universal rule. There are pockets of political strength in every university with local lists of recruitment to enlarge their own catchment areas. In research instead of becoming innovative, technology is imported quickly. The parameters to judge teacher's performance are dubious and at best conciliatory. There is a UGC copy book recommendation of a minimum number of 180 teaching days but its implementation is nowhere in sight in the country with cyclic continuity of examinations, national and regional holidays, long vacations, preparatory holidays compounded by delays in declaration of examination results, long admissions schedules and sporadic acts of student activism. The reasons advanced for these may be many but the teaching mandate has remained undervalued. There has been a contributory degradation all around. The decline in university system is distinct even though it is socially unpalatable and unfortunate.

University Grants Commission was established as an apex central academic body charged with the duty of coordination and maintenance of standards of higher education. In this exercise it disburses developmental grants to the universities and the colleges besides offering assistance under a large number of other schemes and projects that it keeps on floating from time to time at the national level. Its endeavour to bring so much of activities of higher education within its grasp and gamut is laudable, but the recent near phenomenal expansion of the system has gone beyond its comprehension and control. Its schemes do not get addressed to most of the universities in the country. Its system has started creaking with its hold becoming loose and approach remaining perfunctory. While it continues to respond to the challenge of change in higher education it also continues to suffer from a visible resource crunch and iniquitous attention. Except for the 9 central universities, 12 deemed universities, 55 Delhi colleges and 4 colleges affiliated to Banaras Hindu University, not many of more than 7,000 colleges and 190 universities get suitably and timely addressed. The communication gap is crucial. Its schemes to finance capital projects are beset with numerous procedural bottlenecks and bureaucratic delays. Though it is extending its area of activities with every passing day its distribution of funds is anything but democratically needbased and as per area specific needs. At best its approach has been selective and recommendatory in research in universities and conventional and unimaginative in colleges. While the universities have gained marginally the colleges have at best maintained status quo. The lack of possibility of friendly intervention of UGC has led to this practical impasse.

While the country is passing through a period of financial stringency and resource crunch, planning is intended to be assigned greater priority and reflection. The relative autonomy of institutions of higher learning notwithstanding, there has to be a national governance and control at the state, central and UGC levels to ensure that the self-governance and local managements do not alter the priorities of aims of higher education towards consolidation of human resources while making positive use of the sparse available resources. It is only through willingness of an institution to submit to financial discipline that the resources can be utilized properly. There has to be a rational control over the present situation and conscious efforts require to be made to ensure proper use of funds for attainment of specific institutional goals. While change is the requirement of times, social responsibility in the shape of commitment to exploit every possible opportunity to create linkages between resources and our designs, is the basic need. In this task the initiative of the managers of institutions of higher education, involvement of students and a firm commitment of political will, are required particularly when the increasing burden of population, growing unemployment, poverty and illiteracy, are required to be contained. Unconventional methodologies such as distance education mode, accreditation of nonformal education, private appearance etc., would be the steps needed towards liberalisation of education to tide over the present resource crunch and on account of which higher education has to be made selective and cannot be permitted to be a mere democratic obligation. Advancement has to go beyond the possibilities of conventional higher education system and for this it has to be taken out of the noose of our populist political compulsions, lethal jealousies of teachers and shortsighted approach of regional thinkers. It calls for comprehensive reforms and strategies linked to institutional performance. Funding facilities have to be correlated to performance indicators, teaching excellence, value added products, both academic and vocational. Education has to sustain developmental needs. Development has to be correlated to certain financial inputs. The universities and the colleges have not merely to be purposeless congregations of students and teachers. The traditional view has to change. Equality of opportunity as a constitutional right may be ensured only through diversified means. The so-called guided reading in the colleges and universities be replaced by a more effective education corresponding to emerging occupational patterns with cost effective educational planning and restructuring as the only answer. The universities have to be pressed for greater economy and greater selectivity.

Future Funding

In the new framework for future funding of higher education public funds may go under some key principles that correspond to enhancement of level of teaching and research. While liberal funding may be available both for quality and efficiency for strengthening of teaching and sustainable research, efforts would be required to be made to build and preserve distinct individual features of national institutes of education and funds will have also to be provided to institutions which cater to area specific needs and have distinct advantages. Besides catering to research-based criteria through selective allocations, common funding pattern to address common needs of higher education would also be necessary. Where selective allocations of funds for research on the basis of assessment criteria would promote research, need of funds for commonweal can also not be ignored because it is through this alone that common students interests in democracy can be stimulated and herein lies the social responsibility function of the state through state funding of higher education. Rationalisation of performance based grant to encourage competition and innovation would be an objective parameter contrary to which it would act as a strong measure to discourage non performing institutions. This would mean examination of relevance of courses, students enrolment, staff establishment level, evaluation of teaching and research. On the basis of an encouraging performance report vis-a-vis its future designs, the funds may be allowed to provide their appropriate and judicious use. Mere proliferation of repetitive courses and improvement in enrolment levels should not draw any substantial investment. In fact, educational investment must take a longer view and contribute to future consolidation. Different levels of funding such as of the state, the UGC and other funding public bodies, create an interestingly anachronistic situation now. While teaching should be a state subject and all grants directed towards it should be a state function, research should be the responsibility of the centre and the UGC. There should be a unified national system to sustain innovation and consolidation in research and to keep a check on regional replication in research. Research funds should be allocated through a research council on the basis of competition at different levels. Only such research designs and projects as promise national application and economic growth, should be promoted. Though recognition of plurality of voices in academic community contributes to the academic health of the country yet any possibility of confusion and wastage being caused through this should be avoided and the work which is overwhelmingly indigenous should be encouraged.

In an environment of fiscal crunch the public will always seek assurance that the institutions of tertiary education are making effective use of their money. While the common man does not understand the running costs yet its social impact is available to him in the shape of unemployment and narrowing of opportunities. While on the one hand the institutions may be embarking upon extensive expansion plans to accommodate maximum number of students with reasonable physical and teaching facilities yet the general clamour for squeeze of expenditure is significant. The fees cannot be increased as a single item effort nor can resources be augmented in the face of tremendous money shortage in the country. So it is only through selective funding in case of research and lesser dependence on public funds for routine courses that higher education funding will have to carve its future. Unless higher education contributes to economic growth through the agency of its products and institutions it can no longer be supported by fair minded scholars and planners. The whole system requires to be revitalized and restructured in this global perspective. The programmes will have to be regrouped, the teachers given a new orientation linked to accountability. Research personnel will have to establish their highest calibre and credentials both through education and training results. Education at the collegiate level will at best go as a cooperative venture. They will have to find their own funding for their survival. Conversely the students will have to seek enrolment in the open universities to make their learning less expensive. With the overall global resource limitations, no country, in fact, can afford total state funding of tertiary education for all even as a social responsibility function in a democracy.

Under the new future dispensation funding priorities are bound to change. Mindless expansion of formal courses and colleges will have to be stopped to be encouraged after the Open Learning System becomes a more viable alternative with greater cost efficiency and social reach without insistence on barriers of eligibility. Face to face teaching, as a responsibility of colleges and universities will survive only if it is to be sustained by scholarly leadership and positive affirmation of the role of teachers in ensuring academic standards. The present pace of irrelevance of classroom teaching shrinking the base of its credibility will have to be taken over by a better managerial responsibility and leadership of the teachers. The present state of complacency and indifference in administration will have to be replaced by better decision taking roles of teachers. Teaching will have to be more dynamic with planning of lessons with greater intellectual commitment to stimulate active learning. The students in their turn will have to be more critical and creative thinkers. Only such performance oriented institutions as have such holistic perceptions and promise will deserve social sustenance of public funds. This may look to be a radical departure from the existing structure as has been experimented in the case of development of autonomous colleges. But this may be the only way left with the institutions to respond to the needs of community to participate in its growth. Unless objectives of equity and excellence are correlated to relevance and efficiency, no system can deserve and draw perennial grants because it will lack social commitment.

Such basic issues have compelled rethinking on funding patterns in Australia, England and many other countries of the Commonwealth. Rationalisation of funding procedures has even been followed in many African countries. The grants are being linked to performance both in teaching and research. Increasing cost and diminishing income is a worldwide phenomenon. The pattern of flow of resources into the system of tertiary education presents no different a picture. While inputs are essential for the orderly development of the country, persisting inadequacies of the system also require a periodic review through a comprehensive reframing of its priorities so that the funding issues get linked to performance and efficiency. This may also be necessary to liquidate cumulative deleterious consequences of irrepressible pressures of expansion that have now begun to threaten the limited resources of the country.

Role of Private Investment in Higher Education : Miss Mohini Jain and Capitation Fee

N. L. Mitra*

Introduction

Medical education in India has become a very litigative area. Decision in each litigation adds to more and more conflict and confusion. Supreme Court had to intervene in the admission process; criteria of selection; admission test and in every aspect of medical education.[1] Recently, decisions of the Supreme Court of India, A.P. High Court, Karnataka High Court and Maharashtra High Court added further dimensions. The decision in *Miss Mohini Jain v State of Karnataka and others*[2] raised many questions involving the right to education as a part of 'right to life'. Besides, it has also raised the question of private investment in medical education. This decision has far-reaching consequences and merits special attention, specially because issues raised today in medical education are bound to be extended to all branches of higher education and research tomorrow. It has a bearing on national policy on higher education and research in general. Medical education has come under focus particularly because of (a) high expectations of middle class from medical education; (b) the lack of an alternative to medical education in the country as medical education in foreign countries is almost closed to Indians, and (c) there is a wide gap between demand and supply. Anyway, questions raised in the case are extremely important for all levels of higher education and research.

The Case and the Decision

Miss Mohini Jain, a resident of Meerut was informed by the management of Shri Siddhartha Medical College, Agalokote, Tumkur, that she could be admitted to the MBBS course provided she deposited Rs. 60,000/- as the tuition fees for the current year and provided a Bank guarantee for the fees to be paid for the remaining years. According to the petitioner, a further sum of Rs. four and a half lakh were demanded as capitation fees by the management which was denied by the management (this was, of course, the common experience of the students of private colleges). Her father informed the management that it was beyond his means to pay the annual fees of Rs. 60,000 and as a consequence she was denied admission. The Karnataka Educational Institutions(Prohibition of Capitation Fees) Act, 1984 eliminated the practice of collecting capitation fees for admitting students into educational institutions. The Act also authorised the State to regulate the tuition fees to be charged by the private institutions. Accordingly, Karnataka Government issued a notification on June 5, 1989 under Sec. 5(1) of the Act fixing the tuition and other fees and deposits to be charged from the students by the private medical colleges in the State. Under the notification, the candidates admitted against 'government seats' were to pay Rs. 2000 per year as tuition fees. The Karnataka students, other than those admitted in the 'government seats', were to be charged a tuition fee of not more than Rs. 25,000/- per annum. Indian students admitted from outside the State of Karnataka were to be charged a fee of not more than Rs. 60,000/- per year. Miss Mohini Jain contested this notification to be unconstitutional on the ground that such an annual fee of Rs. 60,000/- was considered to be high to be called as tuition fees and was in fact the capitation fee.

The Supreme Court took labour to conceptualise the *ideal* behind the *constitutional philosophy on education*[3] and articulated an underlying relation between Articles 38[4]; 39A[5]; 39(f)[6]; 41[7]; 45[8] of the Directive Principles of State Policy and Article 21[9] of the Fundamental Rights. Thus the Court held that "the 'right to education', therefore, is concomitant to the fundamental rights.....". The Court further held that "the state is under a constitutional mandate to provide educational institutions at all levels for the benefit of the citizens. The educational institutions must function to the best advantage of the citizens. Opportunity to acquire education cannot be confined to the richer section of the society.... The State may discharge its obligation through state owned or state recognised educational institutions. When the state government grants recognition to the private educational institutions it creates an agency to fulfil its obligation under the constitution. The students are given admission to the educational institutions whether state owned or state recognised in recognition of their 'right to education' under the Constitution. Charging capitation fee in consideration of admission to educational institutions, is a patent denial of a citizen's right to education under the Constitution".

The Court further explained the constitutional scheme on education and held that capitation fees are nothing but price for selling education. "The concept of 'teaching shops' is contrary to the constitutional scheme and is wholly abhorrent to the Indian culture and heritage.......... Education in India has never been a commodity for sale". "The state action in permitting capitation fee to be charged by the state-recognised educational institutions is wholly arbitrary and as such violative of Article 14 of the Constitution of India". The Court considered charging a fee of Rs. 60,000/- p.a. while students in government seats were charged Rs. 2,000/- p.a. as 'extraction' and 'in fact a capitation fee' in disguise.

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Some important concepts involved

Two important concepts require clarification and explanation. The first is 'capitation fee'. It is defined in the Karnataka Educational Institutions (Prohibition of Capitation Fee) Act, 1984. But to my understanding 'Capitation fee' is one which tries to realise a part of 'capital expenses' from the students by the management. In this regard, it is not only legally objectionable, but, it has no moral sanction, too. In Miss Mohini Jain, the Supreme Court held that 'Capitation fee' makes the availability of education beyond the reach of the poor. The state action in permitting capitation fee to be charged by state-recognised educational institutions is wholly arbitrary and as such violative of Art. 14 of the Constitution of India....The capitation fee brings to the fore a clear class bias. It enables the rich to take admission whereas the poor has to withdraw due to financial inability. A poor student with better merit cannot get admission because he has no money whereas the rich can purchase the admission". Anybody ready to extend education facility must be ready with infra-structural inputs either from self-generating sources or from any other source. Capital investment cannot be charged on the buyer in any type of "shops" in open-market economy. Capitation fee is to be distinguished from donation. It is a kind of consideration for admission and is a condition precedent to admission, a consideration for admission. In free market logic of contract, such an agreement is void being against public policy. Tuition fee on the other hand, is a charge for running or operative expenses. Every educational programme will involve running, maintenance and operative expenses which are shared in the tuition fees and thus, it is a condition subsequent to admission.

Is right to education included in right to life?

Supreme Court has tried to give a wholesome interpretation to the fundamental right of 'right to life' by irrigating the right with source-inspiration from Article 41 of the Directive Principles. Of course, Art. 21 in its negative framework can be addressed only in the context of a friction between public (state ?) or private effort of 'deprivation' and a private 'right to life'. In that sense, according to some 'sustenance' of 'life' is a private matter of enterprise and not a public 'duty'. This is a very strict meaning. Even if 'right to life' is a private state of affair, state cannot be absolved of its responsibility in matters of private exploitation specially when it is a welfare state. The directive in Art. 41, therefore, on the state to make effective provision for securing (a) right to work; (b) right to education; and (c) right to public assistance, has to be read with Art. 21 to make provisions of Art. 21 positively meaningful. But the question arises due to reference to two external logics, viz.:

a) Art. 41 is subjected to the economic logic. The State shall make provision to secure the three positive conditions of 'right to life', i.e., right to work, right to education and right to public assistance, 'within the limits of its economic capacity and development'; and

b) Art. 45 gave a 'denotative' meaning of the word 'education' in sofar as it is a state responsibility. It directed the State to provide for free and compulsory education upto the age of 14.

As such whether 'right to education' includes 'right to higher and professional education' is a matter of doubt. Even if normatively it is included, by practical application of economic reasoning it is inoperative. It is perhaps for this reason alone that our founding fathers made these provisions unjusticeable.

A writer in an article[10] built up an argument that primary education being a 'social good' as it involves many social benefits (externalities) in a democracy, was proposed by the constitutional framers as a state duty. But according to him, higher education was a 'private property'. He refused to accept an argument that higher education is a 'basic need'. In a different context[11], courts have also decided that income generated of higher learning was personal property which cannot be demanded to be shared by other family members and the society. One may not agree with the author in trying to examine the validity of his economic logic. In the highly subsidised higher education in India, most of the benefits were derived by those whose parents were otherwise able to maintain the cost of education, but were doubly benefited on account of the subsidy for the education of their children. And this is done at the cost of poor tax payer. As for example, the per capita cost of medical graduation at the minimum standard fixed by the Medical Council of India (MCI) comes to about four lakh rupees. If the state has to subsidise the medical education totally, the state governments have to pay maintenance grants for each seat to the extent of Rupees four lakhs minus Rupees ten thousand (i.e. amount of fee charged at the rate of Rs. 2,000/- per annum). That comes to about Rs. three lakhs ninety thousand. Someone from the back may raise the question, why even 'ten thousand'? Leave that question aside. At this cost of subsidy a state government may run only a few minimum medical, engineering or other institutions. Who would be benefited by this policy? Would it not hurt the sons/daughters of doctors, lawyers, bureaucrats, businessmen, professionals? How many of our rural people, first generation students, sons/daughters of poor agriculturists are benefited by our present higher educational institutions? It is not difficult to justify professor G. Thimmaiah's logic that presently higher educational and professional institutions subsidise education for those who can maintain it, and at the cost of those who are mostly poor, backward and rural. Afterall, you do not excuse poor people from paying sales tax or excise duty. The World Bank has in its recent survey criticised the policy of the Government of India on the ground that "subsidies, intended for the poor but which accrue mostly to richer farmers". This is true not only in agriculture but also in every sphere, more so, in higher education because 95% of the benefits in higher education in the country are enjoyed by middle and upper class of the society, at least 60% of whom can meet the education expenses themselves. The system would have already broken down but for low budgetary allotment in education, consequential poor development in higher education and research and participation of the private efforts at every levels of education. Should then 'higher education' be at all treated as right to life, a 'basic need'? Prof. Thimmaiah did not have any doubt to reason out that 'it is a private good and definitely constitutes private wealth/property'. Under the present constitutional structure, can we say that the knowledge and efficiency accquird due to higher education at the cost of social investment is a social wealth and not an individual property? What happens then to Art. 19(g)? Is then our constitutional philosophy suggesting that 'private property' can also be acquired by 'social inputs'? That shall then be a naked exploitation of welfare economics by a capitalist format which staunch capitalists shall also morally reject. It shall be an exploitation of the poor for intellectual slavery. Can 'right to life' go to such an extent?

Higher education cannot fall into the same line of primary and secondary education which is a 'basic need' in a democratic system because in such a political system basic education generates social values but does not create any intellectual discrimination on the pure logic of individual capacity of income generation or employment. Upto a general standard, education is a 'basic need'. But a line has to be drawn in a mixed economy allowing 'private property'.

What is this animal, 'teaching shops'?

Perhaps the judge has used this word as a profitable venture, a business enterprise. A 'shop' means a business enterprise with a motive of earning profit. A 'shop' is an effort of 'living'. True, this is an antithesis to Indian approach. According to Indian *Samskara*, a teacher taking remuneration was thrown to the class of Sudra from his *Brahmin* status. Education cannot be a ground to float a business. But how one can prevent a 'teaching shop' in an open market economy? A market economist would argue that only 'efficiency' in running a 'shop' shall prevent it. Education is too costly an experiment for business and too expensive, too! But he (market economist) is not also against all sorts of regulations. State can certainly regulate unethical business deals in education and in other forms of business too. As for example, 'Capitation fee' is certainly preventable. One cannot make capital profit for transacting in any business by way of right, far less is education.

What is a reasonable tuition fee?

Education is certainly a high investment area of generating future resources. Besides a huge capital infra-structural need it requires growingly high running costs. As for example, a very defensive calculation for running cost of a medical degree programme at the standard level prescribed by MCI is about Rs. four lakh in course of five years. In *Miss Mohini Jain*, it was argued that the cost of the course per person was about Rs. five lakhs. The question is who should pay for it. In a socialist economy State takes the entire care and uses the finished product as the 'social good' or 'social property'. In a capitalist format, education at all levels is a matter of 'private property' and involves 'private wealth'. In a welfare economy or mixed economy, State has to see that no one is deprived of education (including higher education) only because theperson (or his/her guardian) is unable to provide for the cost. The primary responsibility is upon the private party to meet the cost failing which State has to provide the fund directly or see that the fund is provided, as for example, under Schemes of banking loans or 'earn while you learn' to pay for education.

Sainik Schools run thoughout the country, follow a more rational policy on school fees. Total school fees are calculated. State grants the scholarships proportionately on the basis of income of the guardians. In a welfare state, equality is given in opportunity not in the result. A person having the relative merit in comparison with other applicants must be provided equal opportunity so that only on financial reasons there is no discrimination. If that is the principle to be followed, how can one say any fee structure to be reasonable without referring to the financial dispensation of the whole affair! In medical education, high running expenses are to be met. If the government does not give any maintenance grant it cannot fix the rate of tuition fees arbitrarily. If the expenditure is about Rs. four lakhs, how can one fix tuition fees at the rate of Rs. 2,000/- p.a.? That 'itself' is arbitrary. The other question is how high can the tuition fee be? Mathematically tuition fee must be equal to 'total running expenses minus grants received and funds generated for maintaining the course. That is, the per-capita fee may be calculated in a programme, as

$$\frac{e-(g+d)}{n}$$

where e is equal to total running expenses; g means grants received; d is interest received on corpus for running the course and n is equal to number of participants. Whether the fee is high or low is a relative term to be assessed in view of the income of the parents. If that injures the adult prestige of the students, a system of educational loans and scope for earning while learning must be developed. State has to create these facilities instead of fully meeting expenses. A pure 'social value' generation policy and 'public investment in education' did not 'pay of' in Soviet system. Indian experiment of state's responsibility develops a psyche of 'dependence'. State has to take a policy of helping all meritorious students seeking admission to go for a personal obligation to meet the education expenses. There must be scholarships or work assistantships or loan scholarships available to students of higher education and research for those whose parents are unable to support entire cost of education or for those students who are unwilling to take their support.

Private institutions must not be pressed into such a situation that they are unable to run the institutions. Cost involved in education is a matter of fact and not of any ideal or norm. As such whether a fee charged is just or unjust does not depend upon the 'quantum' of it, it depends upon the expenditure involved. It is purely an economic issue.

In a mixed economy requiring rapid expansion and growth, an attitude required is not to create any disincentive to private investment because that may give wrong signals. What is required is proper assessment of fact situations and a policy of appropriate blending of State action and private efforts. An attempt to give higher education at throw away prices creates a fault in personality growth of the recipient of subsidies and ultimately breaks the system. All our universities are resource-dry; capital recessive and absolutely dependent. This cannot be a healthy climate for free and fair education. It is true that Court is not a policy maker but in every value decision there is a policy involved. It would have been better had the Court appreciated a rational quantum of fee for maintaining the medical course and direct the payment of it either out of state sponsored scholarships or met out of loan scholarships or out of self-earning. Afterall it is common to see an Indian or a Bangladeshi or a Pakistani or a Chinese medical student working in a five star hotel like Hyat Regency or in wayside food processing shop in Chicago or Boston to meet his/her education expenses. If that can be done there, a student can try to do it here, too, to meet the education expenses. Our false value or nature of 'dependence' stands in the way of dignity of labour.

A concluding remark

Indian Constitution does not profess a totalitarian state. A proper blending of State effort and private effort is what is possible under the Indian Constitution. In a Nehruvian model, State takes a 'lead' role and generates funds in collaboration with 'private' investments. An 'ideal' of depending on state for everything is perhaps a 'too much used' tool the credibility of which is presently doubted. But, State's role in protecting everybody against all sorts of exploitation is now well recognised.

The concept of recognition necessary for a private institution to run can also be questioned on merit. When more and more people talk about abolition of Licence Raj, why should there be a question of government recognition necessary for a private institution to run? A medical college is required to be recognised by MCI after fulfilling conditions of standards for the purpose of recognising the degree for issuing a certificate of practice. This is a quality check. This is understandable. This is applicable for both government medical colleges as well as private ones. An higher educational institution requires approval of the institution for the purpose of providing instructions at the standard level and for appearing in university examination to obtain degree. One may understand a prior condition for MCI recognition or university recognition or standard fulfilling which only a State-run or private-run institution is to be allowed to start functioning. That shall ensure capital investments already done to lay infrastructure before an institution starts functioning. What is the necessity of State approval then? Doesn't it then mean putting a political pressure on the University and MCI? If State has to provide any grant, such an approval is necessary. This is understandable. But where State does not provide any grants why any recognition or approval would be at all necessary? One may wonder about this. In a welfare country such a regulation is necessary because no one should be allowed to exploit. But, in fact, the concept of state recognition back fires in most of such cases. It restricts the private institutions to operate only on political conditions and thus allows no qualitative competition. If we continue an open market policy we may, perhaps, have to think about allowing private institutes of higher learning and research to compete with State sponsored and run universities and institutions. Interestingly, our judiciary perhaps could not yet fall in line with open market philosophy pursued by body polity. It is for that reason, a high court issues injunction on private institutions to start functioning even after they were recognised by the Government.[12] A policy suited for a socialist economy tried to be used in an open market framework is just like attempting to put a square peg into a round hole. It is now better to allow private investments to strengthen our institute of higher learning, too!

Notes

1. Mitra, **University News** Vol. XXIX No. 21, P. 2 to 6
2. JT 1992(4) SC 1992
3. The Court in fact referred to **Bandhua Mukti Morcha** v **Union of India** (1984) 2 SCR 67; **Pradeep Jain** v **Union of India** (1984) 3 SCR 942; **Francis Coralie Mullin** v **The Administrator, Union Territory of Delhi** (1981)2 SCR 516; **E. P. Rayappa** v **State of Tamil Nadu** (1974) 2 SCR 348; **Ajay Hasia** v **Khalid Mujits et al** (1981) 2 SCR 79; **Maneka Gandhi** v **Union of India** (1978) 2 SCR 621 to **R.D. Shetty** v **The International Airport Authority** (1979) 3 SCR 621 and bring out a constitutional philosophy on education and establish a proposition that education is a fundamental right of the citizen.
4. State to secure a social order for the promotion of the people.
5. The State shall direct its policy towards securing that the citizens, men and women equally, have the right to an adequate means of livelihood.
6. That children are given opportunities and facilities to develop in a healthy manner and in conditions of freedom and dignity and that childhood and youth are protected against exploitation and against moral and material abandonment.
7. The State shall within the limits of its economiccapacity and development, make effective provision for securing the right to work, to education and to public assistance....
8. Provision for free and compulsory education for children.
9. Article 21 deals with protection of life and personal liberty.
10. G. Thimmaiah, Pitfalls of higher studies for all in **Deccan Herald**, Saturday, August 15, 1992, P. 24. The author holds "It (higher education) is a private good and definitely constitutes private wealth/property". That is why he asks, "If this logic is accepted, then can we ask the state governments to spend public funds to create private property for individuals to earn income for themselves?"
11. See **Metharam** v **Rewachand** AIR 1917 PC 105, **Gokal Chand** v **Hukum Chand** AIR 1921 PC 35, **Jai Dayal** v **Narain Das** AIR 1932 Lah 127 and **Ramakrishna** v **Vishnumoorthi** AIR 1957 Mad 86.
12. See **Deccan Herald**, 17th August 1992.

Right to Education
Court Succeeded Where Academia Failed

G. D. Sharma*

In the landmark judgement given by Justices Kuldip Singh and R. M. Sahai of the Supreme Court of India on July 30, 1992, the judges observed that 'dignity of man is inviolable. It is the duty of the State to respect and protect the same. It is primarily the education which brings-forth the dignity of a man." They further held that "it was with that hope that Articles 41 and 45 were brought in Chapter IV of the Constitution. An individual cannot be assured of human dignity unless his personality is developed and the only way to do that is educate him." The issue of human dignity was further seen in the context of Article 21 of the Constitution of India to include the Right to Life with human dignity and all that goes with it. It was further stated that "the right to life under Article 21 and the dignity of man as an individual cannot be assured unless it is accompanied by the right to education." The judges observed that "the State Government is under an obligation to make an endeavour to provide educational facilities at all levels to its citizens." The judges reiterated that "the right to education therefore is concomitant to the fundamental rights enshrined under part III of the Constitution. The State is under a constitutional-mandate to provide educational institutions at all levels for the benefit of the citizens." Accordingly, they held that, "the educational institutions must function to the best advantage of the citizens. Opportunity to acquire education cannot be confined to the richer section of the society." The judges clarified it further by stating that "we hold that every citizen has a right to education under the Constitution. The State is under an obligation to establish educational institutions to enable the citizens to enjoy the said right. The State may discharge its obligation through state-owned or state-recognised educational institutions. When the state government grants recognition to the private educational institutions it creates an agency to fulfil its obligation under the Constitution. The students are given admission to the educational institutions – whether state-owned or state-recognised – in recognition of their right to education under the Constitution. Charging capitation fee in consideration of admission to educational institutions, is a patent denial of a citizen's right to education under the Constitution."

The judges also made a reference to Article 14 of the Constitution of India which attempts to ensure the equality of opportunity. The judges observed that "capitation fee brings to the fore a clear bias. It enables rich to take admission whereas poor to withdraw due to financial inability. Poor students with better merit may not get admission because they have no money whereas the rich can purchase the admission. Such a treatment is patently unreasonable, unfair and unjust. There is, therefore, no escape from the conclusion that charging of capitation fee in consideration of admissions to educational institutions is wholly arbitrary and as such infracts Article 14 of the Constitution."

The problem of colleges which are charging capitation fee has assumed serious proportions for the last 2-3 years. In one stroke 20 colleges (12 medical and 8 dental colleges) were opened in Andhra Pradesh during the last one year. There are one to two dozen colleges each in the States of Tamil Nadu, Karnataka, Andhra Pradesh and Maharashtra which are charging capitation fee in consideration of admission from the students. Not only the medical colleges, the engineering colleges too are charging capitation fee in consideration of admission. A good number of such colleges opened in Maharashtra have been charging capitation fee from the students.

In the country there are 270 engineering colleges and nearly 395 medical education colleges. Nearly 150 thousand students are studying for medical degree courses and about 200 thousand students are studying for engineering degree courses in the country. Admission to these colleges have been regulated through entrance test. There is a common entrance test either at the national level or regional or the state level and similarly common entrance test for medical colleges at the state level. Initially admission to these colleges was on the basis of general merit, i.e. on the basis of the highest percentage of marks obtained by the students. Consequent upon the greater demand for seats in engineering and medical colleges and a large number of students applying for the same the entrance test was introduced. As there has been severe competition, only the best ones with very high percentage of marks ranging between 85-95% and qualifying in the entrance test examination could only seek admission to these colleges. But some of the high fee charging and capitation fee charging colleges admitted students with just first-class marks in consideration of money. Whereas many people who have more than this level of performance but cannot afford to pay money were deprived of availing of the opportunity of professional education.

The University Grants Commission which is responsible for maintaining the standards of higher education has been insisting upon having common entrance test for various programmes of studies. There is common entrance test for admission in IITs and Regional Engineering Colleges. Accordingly, it has introduced test for Junior Research Fellowship and Lecturership, so as to select the best ones for pursuing research work and for the employment in the universities and colleges. Now UGC is considering to introduce an admission test for admission to the postgaduate degree courses. This is contemplated to ensure high standards in admission to the universities and colleges.

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On the one hand, the trend is towards making admission through rigorous competition while on the other capitation fee colleges are allowed by the University Grants Commission to admit students without any entrance test and in consideration of money. This is quite ironical and results in double standards.

The concept of liberalisation and privatisation of higher education has further attempted to give ideological support to this new trend of dual standards. It is also alleged that there exists a nexus between political forces, monied class and vested professional interests. But the larger body of academia have not responded to thwart the growth of such colleges. In fact, a kind of pressure has been generated on the thinking of academics that there is a resource crunch and no resources can be further provided for higher education. This has allowed provision of spurious and sub-standard education without it being questioned.

It is puzzling that though the present day political philosophy focuses on competitiveness in economic and social sectors, when it comes to competitiveness in education sector (which is almost essential for the maintenance of standards and the persuit of excellence) an attempt is being made (under the name of privatisation) to dilute this competitiveness and provide facilities for medical and engineering education to those who can buy it. One might say such contradictions are hallmark of Indian body politic. The issue should be examined dispassionately from the point of view of equality of opportunity and excellence. Right to education is a fundamental one. If state is providing educational opportunity at any level and if these opportunities are limited in number then those who are the best in competitiveness should have right to education and not those who can buy it. In fact, to ensure equality of opportunity and social justice, education becomes fundamental. The opportunity for education should not therefore be infracted by any other consideration than competitiveness and quality of students. In fact, one of the major functions of the state should be to ensure this. The equality of opportunity is pre-requisite of human dignity and development. Hence, the investment in education should be completely and fully provided by the state. The state should develop instruments for mobilisation of resources from the public so that it can mobilise resources from the rich and redistribute the same for the development of human resources and other social and economic sectors which benefit the poor.

Had the academia checked these undesirable developments, the Court would not have intervened. In fact, Court has succeeded, where academia, more particularly the University Grants Commission – which is responsible for maintaining standards – has failed to check undesirable developments in the system of Higher Education.

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Eliminating Boredom in Teaching

M. S. Bawa*

Introduction

One of the major problems that the teachers face in the classroom is that of securing and sustaining attention of the pupils. A teacher's mastery over the subject matter and use of right techniques of teaching fail him if he is unable to make the pupils interested in the lesson and secure and sustain their attention. Supervisors in colleges of education generally attribute this inability of student teachers to lack of liveliness on their part. In other words it is ascribed to their inability to bring about frequent variations in teaching-learning activities through various means.

Psychologically, it has been established that if a person is exposed continuously to a stimulus without any variation, it induces boredom, loss of interest and inattention. For example, the feeling of sleep which one experiences while travelling in a bus or in a train is the result of continuous exposure to the same stimulus; that is, a particular type of sound. On the other hand, if one is exposed to a stimulus in which variations are brought about at a frequent and appropriate intervals, it sustains one's interest as well as attention. For example, in a circus, a drama or an opera show, because of frequent exposure to different sets of stimuli, the audience remains interested as well as attentive. The story tellers too make use of this principle for securing attention of the audience. Whenever, they sense that listeners are losing interest in the story, they bring in new elements to rouse their curiosity and keep them attentive.

It may be pointed out that there are a number of factors that determine attention. These factors may be grouped under three categories :

(i) Stimulus variables,
(ii) Organismic variables, and
(iii) Environmental factors.

Under *stimulus variables* are included the factors associated with an object that might facilitate or inhibit the reception of aparticular stimulus information. Examples of stimulus variables are size, intensity, colour, motion, novelty etc. in relation to an object.

Organismic variables include factors that are associated with the person who is attending. Familiarity, emotional appeal, interest, mental set, level of arousal, expectancy and motivation of the attending person etc., are its examples.

Environmental factors are those factors that relate to the conditions in the situation or environment that affect reception of the stimulus. The examples of situation factors are background noise, feedback facility, the nature of incentives – rewards & punishment etc.

In this article the author's concern is with stimulus variations pertaining to teachers.

One of the characteristics of attention is that it never remains fixed; it is liable to shift and fluctuate. It is accounted for by distracting factors. One of the major concerns of the psychologists has been with measurement of span of attention of different age groups. Numerous studies have been conducted to measure it. Depending on the nature and sophistication of the experiments, these studies have come out with different results. However, developmental psychologists agree that generally span of attention of children below 5 years of age is 2.5 minutes and between the age of 5 to 10 years, it is 4 minutes for a particular receptive stimulus. For adults below the age of 50 years, it is 7 minutes and falls down to 5 minutes for adults in the age group of 50-55 years. Thus depending upon the type of students, a teacher must bring about variations in his attention drawing behaviours (teaching activities) within 4-7 minutes, if he wants to keep them attentive in the lesson.

How to bring about variations in attention drawing behaviours is a problem faced by many teachers from primary through university levels. The solution to this problem lies in acquiring competence in the skill of stimulus variation. This skill helps the teachers in securing and sustaining the attention of the students in teaching.

Skill of Stimulus Variation – Its Meaning

For understanding the meaning of the skill of stimulus variation, it is essential to know the meaning of the terms 'Skill' and 'Stimulus'.

Skill refers to 'a physical act or an intellectual process or a combination of both, that can be performed in a consistently proficient way in repeated performances'. According to this definition a skill is either a physical act or an intellectual process or a combination of both. Its defining attributes are *consistency* and *proficiency* in repeated performances. These attributes exclude from within the scope of skill successful performances on account of chance factors.

Generally in the performance of any activity, varied combination of physical acts and intellectual processes are needed. Some activities are loaded more with physical acts, others with intellectual processes and still others with a varying degree of combinations of the two. Some examples of skills having a higher degree of physical component are : setting a film projector, driving a

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car, playing cricket etc. Such skills are also known as psycho-motor skills as in the performance of these skills coordination of sensory and motor activities is needed. Asking questions at different levels, explaining, reasoning, reflective thinking, evaluating pupils' learning etc. are examples of skills having greater degree of intellectual processes than physical acts. Examples of skills requiring a mix of both intellectual processes and physical acts in somewhat even proportion are organisation of collected data into usable patterns such as tables, graphs, time line diagrams, etc. Preparation of building plans, blue prints of machinery etc. are some other examples of the same category.

It may be pointed out that the quality of a predominantly psychomotor skill can be judged through a demonstration of its performance whereas that of a predominantly intellectual skill, through its result or effect. For example the quality of the skill of setting a film projector can be demonstrated whereas the quality of performance of the skill of explaining can be judged from the extent of pupils, learning.

In behavioural psychology, the term *stimulus* refers to 'any *objectively* describable situation or event that is an occasion for an organism's response'. According to this definition a stimulus (plural - stimuli) is an event in the environment or a situation consisting of several events in the environment which can be observed and described. The main characteristic of a stimulus is that it stirs or prods an organism's mechanism consisting of sensory organs, central nervous system and muscles, causing it to respond. In the context of teaching, stimulus or stimuli are all the teaching materials and media – textbooks, lectures, films, questions, T.V. etc., and organism is the learner.

Having known the meaning of the terms 'stimulus' & 'skill', it is now easy to understand the meanings of the 'skill of stimulus variation'. In the context of teaching, the skill of stimulus variation refers to those behaviours of the *teacher* (stimulus/stimuli) that he varies *frequently* for drawing and sustaining attention (response) of the pupils when engaged in teaching. The skill of stimulus variation comprises seven components ; (1) Movements, (2) Gestures, (3) Change in voice, (4) Focusing, (5) Physical participation, (6) Pausing, (7) Change in interaction pattern, and (8) Audio-visual switching. It may be observed that the skill of stimulus variation contains varying degree of combinations of physical acts and intellectual processes. Each of the components of the skill is discussed below:

I. Movements

While teaching, the teacher generally adopts movements-related practices of three types :

a) Standing at one place,

b) Moving about to & fro, and

c)Moving from one place to another with a purpose or from one position to another at appropriate intervals.

The practice of standing at one place while teaching adopted by a teacher is not at all suited for sustaining attention of the pupils. This is so because when the pupils have to look at the teacher standing in a stationary position continuously, their eyes get tired, which in turn causes loss of attention. The practice of moving to and fro is also not favoured for engaging pupil attention. Such movements cause swift shifts in pupil's focus of attention resulting in loss of concentration and, consequently, inattention.

The practice of moving from one position to another with a purpose is most suited for sustaining attention. Change of position by the teacher at appropriate intervals produces a corresponding change in the eye movements of the pupils which keeps them active & attentive. Similarly purposeful movements towards the blackboard for writing, towards a pupil for checking his solution or diagram etc., too keeps them active and attentive. In short, for securing and sustaining the attention of the pupils, a teacher should control his movements in a judicious manner.

II. Gestures

Gestures consist of movements of hand, head, eye, facial expressions etc. for expressing or illustrating an idea, an emotion or a feeling. In other words gestures are non-verbal cues which are used for expressing certain meanings. Depending on the purpose, a teacher can decide whether a gesture is to be made by hand, head or eye etc. or through a combination of two or more of these simultaneously.

Gestures are helpful in making verbal communication effective. Verbal communication combined with gestures is more effective in conveying meaning than that without any gesture(s).

While teaching, a teacher can make use of gestures to direct attention, to emphasise importance of something, to explain ideas, to illustrate feelings, to indicate shapes, sizes, movements of objects etc. Gestures by hands are helpful in explaining shape, size, movement etc; those with eyes in indicating humility, love, joy, distress, satisfaction etc. or for throwing challenges; and those with facial expressions in showing anger, disappointment, fear, irritation, discomfort, contentment, joy, satisfaction etc. Gestures with the head help to indicate approval, disapproval, authority etc.

Gestures can be used in teaching of any subject. While planning a lesson, a teacher can think of the gestures which he would like to use during various phases of the lesson. By practising various gestures he can acquire competence over their use. Once they become effortless, the teacher starts using appropriate gestures unconsciously.

III. Change in Voice/Voice Variation

Research studies have shown that while teaching a teacher spends about 70% of his time on talking. This lends great importance to the quality of speech, which has several dimensions viz. speed, pitch, volume, intonation etc.

For bringing about a better understanding of these components their meanings have been stated below :

Speed refers to the number of words spoken per unit of time.

Pitch refers to the rate of vibration of the vocal cords during speech.

Volume refers to the degree of loudness of speech.

Intonation refers to the rise and fall of voice in connected speech due to variation in pitch. The meanings of concepts, terms, ideas etc. are provided not only by words and grammatical constructions used by teacher but also by the intonation patterns employed by him. The intonation pattern lends greater precision and focus to the meaning. Besides, it provides important information about attitude of the teacher which is often not contained in the verbal structure itself. A statement made in a certain intonation pattern has a certain meaning; but the same statement may have a different meaning if a different intonation pattern is employed by the teacher. For example, the sentence 'she is beautiful' said with a falling tone is a down-right statement; if spoken with a rising tone, it becomes a question and with a rising-falling tone it may be interpreted as an aspersion on the character of the concerned woman.

Each language has its own pattern of intonation. These patterns help teachers in communicating definite meaningful effects amongst the pupils. Teachers should therefore acquire not only knowledge about the intonation patterns of the language through which they teach but also competence over its effective use.

A teacher can modulate his voice by bringing about variations in any one or any combination of these components. Use of voice without any variations by the teacher induces monotony amongst students; judicious variations in the voice on the other hand keeps them attentive and interested in the lesson. It is possible for novice teachers to acquire competence in bringing about appropriate variations in voice through practice under feedback conditions.

IV. Focusing

Focusing refers to such direct behaviours as are used by teachers for securing attention of the pupils as for example on a particular diagram, idea, rule or generalization. Focusing behaviours are of three types : (a) Verbal focusing, (b) Gestural focusing, and (c) Verbal-cum-gestural focusing.

a) *Verbal focusing* : It is used for securing attention of pupils by such statements as 'look at the diagram', 'listen to me carefully', 'watch what happens when the north pole of this magnet is brought near the south pole of the suspended magnet'.

b) *Gestural focusing* : In the context of teaching, gestural focusing refers to securing attention through gestures. Underlining important words or statements on the blackboard by the teacher or pointing out important features of a diagram or characteristic features of the boundary of a country with a pointer are examples of gestural focusing.

c) *Verbal-cum-Gestural Focusing* : In this type of focusing, the teacher makes use of both verbal statements and gestures for drawing attention of the pupils to important points. When the teacher attracts attention of the pupils by pointing to a diagram and saying 'look at the diagram carefully', he uses verbal-cum-gestural focusing.

The art of focusing can be learnt through planned practice. Once these behaviours become internalised, the teachers can use them in a natural and effortless manner.

V. Physical Pupil Participation

Physical pupil participation in the context of teaching takes such forms as dramatization, fixing up an apparatus, solving a problem or drawing a diagram on the blackboard or on the exercise books. If opportunities are provided to the pupils to participate physically in the teaching-learning process, they would remain interested and attentive.

Teachers should use this component judiciously. Sometimes inviting pupils one after another to solve a problem on the blackboard leads to wastage of time. When some of the pupils write shabbily or do the sum wrongly on the blackboard, it leads to loss of interest as well attention on the part of rest of the pupils. Under such a situation appropriate strategy for a teacher would be to direct the pupils to do the sum in their exercise books and to go round and check their solutions.

VI. Pausing

In the context of teaching, pausing means deliberate silence of short interval introduced during teacher talk. For attracting the attention of the pupils to something important, the teacher introduces a pause during his speech. The novice teachers may be cautioned not to use pauses very frequently or for long duration. In order to be effective a pause should be of a short duration. Generally it is of three seconds. If a pause is of unduly long interval, it ceases to be meaningful or effective.

VII. Change in Interaction Patterns

Proctor (1978) defines Interaction as 'the state or activity of working together or with something else, to produce an effect on each other/the other(s)'. Honby (1974) defines it as 'acting on each other'. Sharma et al

(1986) state that interaction is a complex skill and can take place only after the mind has learnt to respond, react and challenge.

Teaching is now-a-days not regarded as a one-way activity in which the teacher speaks while the pupils listen. It is now considered to be many sided activity in which usually the teachers and students act and react with each other, respond to issues raised, challenge each other with a view to bringing about modification of the results. Interactive teaching is said to have four components *viz.* response, reaction, challenge, and modification. Both the teachers and the students jointly engage in activities for finding a solution or an answer to a problem.

Broadly speaking, interaction pattern in the classroom may be divided into three categories :

- Interaction between the teacher and the group of pupils (T ⇄ G)
- Interaction between the teacher and the pupil (T ⇄ P)
- Interaction between/among pupils (P ⇄ P(s))

Each type of interaction is illustrated below with the help of examples taken from teaching situations in the classroom.

1. *T* ⇄ *G* : A teacher demonstrates the correct pronunciation of a difficult word and all the pupils pronounce that word after him. After the teacher has explained a process for solution of a particular type of problem or use of, say, the periodic table, the pupils question the teacher to seek clarifications.

2. *T* ⇄ *P* : The teacher asks a question to which the pupil responds. The teacher follows up the response with another probing question and this process continues till the teacher elicits a satisfactory response. Such events take place when the teacher probes into issues or tests conceptual understanding of the pupils. The process gets reversed when a pupil takes the initiative by asking a question which is responded to by the teacher. The pupil follows up the question with further probing questions till he gets a satisfactory response.

3. *P* ⇄ *P* : In this interactive pattern to a question asked or an answer provided by one pupil, another pupil reacts by providing the answer or by supporting or contradicting the answer. This pattern of interaction usually occurs when a teacher resorts to discussion method of teaching.

It is worthwhile to mention here that if a teacher maintains one type of interaction in the classroom for longer period, the pupils get bored and become inattentive. By varying the interaction pattern after appropriate intervals, a teacher can keep the pupils attentive and interested in the lesson.

Needless to say that it is possible for the student teachers to learn different types of interactive pattern through practice to internalise these patterns.

VIII. Audio - Visual Switching

Teachers provide information and knowledge to the pupils through various media – audio, visual or audio-visual.

Use of speech, radio lessons, taped lessons etc. during teaching are examples of audio media. Examples of visual media are use of specimen, models, charts, cartoons, graphs, maps, slides etc. in the process of teaching. Audio-visual media in the context of teaching consist of educational films, educational television, video educational films etc. For maintaining interest of the students and sustenance of their attention, it is necessary that the teachers shift from one medium to another after appropriate intervals.

Given below are examples of audio-visual switching. Suppose a teacher wants to teach the use of the word 'shut'. He may teach it through the oral medium by telling its meaning. Alternatively, while shutting the door he may speak 'I am shutting the door'. This is an example of simultaneous use of audio and visual media. The teacher may perform this activity in yet another manner. He may at first speak 'I shut the door'. This statement may be followed by the activity of shutting the door. This is an example of audio-visual switching.

It needs to be mentioned that the use of one medium for a long period of time distracts pupils' attention. By bringing about variation in the medium at appropriate intervals, the teacher can sustain pupils' attention. Teachers can learn audio-visual switching behaviours through proper planning and practice and internalise these behaviours.

Acquisition of Competence in the Skill of Stimulus Variation (SSV)

For acquiring competence in the skill of SSV, one should proceed in the following sequential steps :

(a) Acquiring knowledge of various components of the skill, (b) Observe demonstration of the model performance of the skill given by an expert, (c) Plan a micro/mini/full lesson, and (d) Practice the skill under feedback conditions.

Various components of the skill have already been described. As regards demonstration of performance of the skill, one may watch a live demonstration or a video film or a film using a scale of assessment. Demonstrations are useful for showing meaningfulness and for illustrating good performance. The use of a scale of assessment while observing a model performance is commended on the ground that it lends specificity to one's observations. In other words, the observer pays attention to specific behaviours while observing.

A lesson plan is needed for coalescing components of the skill with the content to be taught. A learner may prepare micro or mini or a full time lesson plan with the subject matter over which he has mastery.

Lastly, for acquiring competence in the skill a learner has to do practice under feedback conditions. The learner may teach the lesson to a class consisting of real pupils or his peers. In the initial stages it is advisable to practice the skill in small sized class consisting of 7-10 pupils and at later stages to large sized class. What-so-ever may be the nature of the pupils and size of the class, the learner must practice the skill under feedback conditions. For providing feedback, an assessment scale is needed. It has been provided in Appendix I. The ratings obtained by a learner on various components of the skill are critical judgments of the supervisors. To be more effective, these judgments must be discussed after the lesson. The feedback so obtained by the learner helps him to improve his performance through further practice.

The feedback may be provided by a supervisor. If a supervisor is not available, it may be obtained from the peers or pupils. Alternatively, one may assess one's own competence on the scale after having delivered the lesson. All these techniques have proved to be effective in bringing about modification of behaviours of the trainees. A trainee may continue doing practice till he develops capability to use the skill with ease and precision.

REFERENCES

1. Hornby, A.S. (1979) **Oxford Advanced Learners Dictionary of Current English.** The ELBS/Oxford University Press.

2. Bawa, M.S. (1984), Effectiveness of microteaching with planned integration training and microteaching without planned integration training on the general teaching competence of teacher trainees. Unpublished Ph.D Dissertation. Department of Education, Delhi University.

3. McIntyre, Donald et al (ed) (1977) **Investigations of Microteaching,** London : Croom Helm.

4. Proctor, Paul (1981) **Longman Dictionary of Contemporary English.** Longman.

5. Woodworth, Robert S. & Scholsberg, Harold (1954) **Expermential Psychology.** New Delhi : Oxford and IBH Publishing Co.

APPENDIX

OBSERVATION SCHEDULE FOR THE SKILL OF STIMULUS VARIATION

Name of the teacher :

Topic : Class :

Name of the supervisor :

Date : Time duration :

Instructions : Assess the teacher on each separate component. Make your judgments by encircling one of the seven numbers which represents your assessment on the scale for each component just after the lesson is over.

Components	*Extremely weak*	*Very weak*	*Weak*	*Average*	*Good*	*Very Good*	*Excellent*
1. Teacher made movements from one place to another which seemed likely to encourage useful shifts of attention.	1	2	3	4	5	6	7
2. Teacher used gestures to emphasize important points, to impress emotions, or to indicate shapes, sizes, movements, etc.	1	2	3	4	5	6	7
3. Teacher modulated the voice judiciously to draw attention.	1	2	3	4	5	6	7
4. Teacher focused pupils' attention on particular aspects of the lesson through verbal, gestural and verbal cum gestural focusing.	1	2	3	4	5	6	7
5. Teacher changed interaction during the lesson to secure and sustain attention.	1	2	3	4	5	6	7
6. Teacher's activity resulted in physical pupil participation.	1	2	3	4	5	6	7
7. Teacher used pausing to draw attention or to stimulate pupils' thinking.	1	2	3	4	5	6	7

Aspects of Rural Development – Crucial but Neglected

His Excellency Dr. Hans-Georg Wieck, Ambassador of The Federal Republic of Germany delivered the Convocation Address at the eighth convocation of the Himachal Pradesh Krishi Vishvavidyalaya, Palampur. In his very down to earth address Dr. Wieck talked of two crucial but neglected aspects of rural development and protection of the natural resources on which the livelihood of the rural people depended. He said "one is active participation of the local people, the villagers themselves and the other one is the role of women. Without active and voluntary participation of the villagers no rural development programme will succeed, no matter how sophisticated the planning and the technologies. Without a serious dialogue with the people supposed to benefit from a project, project design and planning will remain utterly unrealistic. Without flexibility to adapt a programme to local needs and priorities, it will not be accepted and valued. Without demanding local efforts and accepting responsibility of local non-governmental organisations for running the project, the villagers will not adopt the project as part of their lives and will not be prepared to contribute to its sustainability.... this obviously applies also and even more to women and to their voluntary organisations such as the Mahila Mandals." Excerpts

Let me also speak briefly about my own country and about Indo-German cooperation. After unification in October 1990, united Germany – the official name continues to be "Federal Republic of Germany" – has a population of about 80 million people (somewhat less than Bihar) in an area of 357,000 square kilometers (somewhat larger than Rajasthan). Economically we are an important partner in the European Community and in the global trade system. The reconstruction and integration of what used to be the German Democratic Republic into the market oriented German economy but also into the high standards of our social safety network is a huge task that will absorb a major share of our financial and human resources for a number of years. We are also heavily involved in the reconstruction of other countries in Central and Eastern Europe and what used to be the Soviet Union. Nevertheless we are confident that we shall be able to succeed without neglecting our worldwide cooperation in particular with developing countries like India. The first year of German unity (that is 1991) has resulted in a big boost to Indian exports to Germany which increased by more than 10 percent in D-Mark terms leading to an Indian trade surplus in trade with Germany.

As to development cooperation it continues at a high level. With a view to support the courageous reform policies of the Government of India new commitments in 1992 will amount to 350 million DM (about 600 Cr. Rs.) including 160 million DM of fast disbursing aid in financial and 35 million DM (about 60 Cr. Rs.) in technical cooperation. In addition, the German Government subsidizes development cooperation between German and Indian voluntary organisations with some 60 million DM per year. The main uses of financial cooperation funds have been power generation, coal and lignite. Most of you may know that Germany helped to set up the Rourkela Steel Plant in the 50ies and 60ies. We are now about to finance the modernization of this plant in order to catch-up with the requirements of the 1990ies. In technical cooperation the Indian Institute of Technology (IIT) in Madras is the largest project worldwide that Germany has financed.

Germany has also collaborated in the development of agriculture and forestry in India. It may be recapitulated that amongst the Indian Intensive Agriculture District Programmes launched ,in ten selected districts in 1960, the Indo-German Agricultural Project was initiated in the districts of Mandi and Kangra in Himachal Pradesh. The project in the Kangra district was started in February, 1967. It was an extension of the Mandi Project in seven development blocks. This project lasted till 20th November, 1977 when it was formally handed over to the Government of Himachal Pradesh. In this project our aim was to improve the agricultural infrastructure of this area. During the ten year period of the project, the population of the district increased by about 26 percent whereas the production increased by about 35 percent. Both Indian and German experts are proud of this achievement. Another example of Indo-German collaboration is the Indo-German Dhauladhar Project (IGDP), and integrated multi-sectoral mountain region development project which was initiated in July, 1980. It had two main objectives : Firstly, it aimed at rehabilitating the ecological system in the project area along with an improvement of socio-economic conditions of the people and secondly, by tackling this very objective, it aimed at developing a cost efficient model for mountain region development of the Western Himalayas. The Indo-German Dhauladhar Project was unique in ecological rehabilitation and improvement of the socio-economic conditions of the people of this mountain region of the Western Himalayas. This project played a key role in preserving the fragile eco-system of this hill state by afforestation of about 3,000 hectares in the Dhauladhar range of the Himalayas and has maintained and rejuvenated about 2,000 hectares of old plantations.

I am happy to learn that the Dhauladhar experience is about to be applied in the Changar Area Development Project in the district Kangra at a cost of Rs. 19 crores in collaboration with Germany. I hope that after some delays preparatory work can be initiated during this year. I hope this project will at least slow down substantially the degradation of the Changar area and will foster the socio-economic developments by active participation of the villagers. It is gratifying to note that the University has recently started an independent Department of Agro-Forests and Environment which will perform teaching, research and extension education activities of this region. This could also facilitate the implementation of the Changar Project.

The German Government is also collaborating in watershed management programmes undertaken by the Indian Department of Soil Conservation in the Central Ministry of Agriculture. The German contribution during the first phase of the project was Rs. 4.20 crores. In Bihar, Uttar Pradesh, Rajasthan, Himachal Pradesh and Tamil Nadu, altogether 15 stations were established and installed with latest equipment to measure rainfall, run-off and sediment load along with relevant meteorological parameters. This was also a necessary pre-condition for the development of computerised data base on hydrology and sedimentation of small watersheds.

The second phase of the project (1992-97) envisages "Integrated Erosion Control Measures" which will be carried out in watershed areas in North, South, East, West and Central India. Germany will spend some Rs. 15 crores for this purpose. Another project of watershed development, soil and water conservation is being supported under financial cooperation in Maharashtra. Still another one is envisaged in Karnataka.

The interrelated problems of over-population, poverty, environmental degradation and the need for evolving sustainable systems of agriculture and other activities suitable for the fragile Himalayan eco-system require all available intellectual capabilities. I am sure you are ready and excited to meet these challenges.

I would also like to invite you to look a bit beyond the boundaries of your specific academic subjects. In the broader context of rural development and protection of the natural resources on which the livelihood of the rural people is based two aspects seem to be crucial that have tended to be neglected so far. One is active participation of the local people, the villagers themselves and the other one is the role of women. Without active and voluntary participation of the villagers no rural development programme will succeed, no matter how sophisticated the planning and the technologies. Without a serious dialogue with the people supposed to benefit from a project, project design and planning will remain utterly unrealistic. Without flexibility to adapt a programme to local needs and priorities, it will not be accepted and valued. Without demanding local efforts and accepting responsibility of local non-governmental organisations for running the project, the villagers will not adopt the project as part of their lives and will not be prepared to contribute to its sustainability. We are stressing very much this point in the preparation of the Changar Project."

As to the role of women in rural development, it is not my intention to add to widespread lip-service paid to this issue. I would rather point to the fact particularly in the hill areas of Himachal Pradesh it is very frequent that men migrate to earn non-farming income in factories or public works while leaving most activities in agriculture and livestock to women, who are already taking care of household and family and who have mostly got less education and training than their husbands. This should at least lead to special efforts to intensify training and extension work that is better adapted to the needs and constraints (esp. time) of rural women. What was said about the villagers' participation in general obviously applies also and even more to women and to their voluntary organisations such as the Mahila Mandals.

Another promising field that merits more attention is non-agricultural activities in rural areas, particularly agro processing. In ecologically endangered areas such as the hills of Himachal Pradesh it is simply not possible to sustain a growing population, much less to improve its standard of living only on the basis of primary production in agriculture, livestock or forestry. The already existing migration shows this very clearly, even if part of it is not permanent. I am sure that there is further scope for a wide variety of agroprocessing activities within the rural area or in rural growth centres. This could insure more productive employment and higher value added by using perishable products that until now do not go beyond local markets and do not fetch remunerative prices.

I am happy to learn from the annual report of the University and also the report presented by your Vice-Chancellor that there are four constituent colleges in the University viz., College of Agriculture, College of Veterinary and Animals Sciences, College of Home Science and College of Basic Sciences with 506 students on roll and 300 faculty members. I note that agriculture is the major vocation of the people of Himachal Pradesh. About 92 percent of the population who live in rural areas depend mainly on farming and allied activities. About 76 percent of the population falls directly in the agricultural sector contributing 43 percent of the state's net domestic product.

Himachal Pradesh is bestowed with diverse agro-climatic conditions comprising low hills, sub-tropical areas, valleys, mid-hills and high mountain ranges. The state is thus suitable for growing a vast array of crops ranging from quality apple and mangoes to off-season vegetables and all types of foodgrains.

Himachal Pradesh is a mountaneous state with a geographical area of 55.57 lakh hectares most of which is under forests, permanent pastures and grazing lands and less than 10 percent is under cultivation.

The ranges of topography soil, climate, rainfall and temperature provide the state with wide opportunities and potentialities for tree-crop-animal based farming systems which very few states in India are blessed with.

I have noted that your hilly state has diverse agro-climatic conditions and in order to cater to the farming problems of different, agro-ecological situations the state has been divided into homogenous agro-climatic zones. The farming in Himachal Pradesh is mostly rainfed as about 17 percent of the cropped area is under irrigation.

The economy of Himachal Pradesh due to its hilly terrain is predominantly mixed farming agro-pastoral, silvi-pastoral and agro-horticultural. Forests account for about 40 percent of the state area which is very little as compared to its geographical and climatic conditions. The forests should be more than 60 percent of the area.

I gather that the livestock population of Himachal Pradesh exceeds the human population with a density of 89 animals per square kilometers as against 77 human beings. As evident in the Dhauladhar area the number of low productivity livestock is one of the main reasons for environmental degradation. The introduction of the jersey breed and the cross breeding programmes has brought out significant changes in milk production. In conjunction with stall feeding it can reduce the pressure on endangered forests or reafforested areas. The area and productivities of natural grasslands and development of alpine pastures will – with due care for the ecology of the region – lead to the development of animal husbandry in the state. The demand for animal products like milk, meat and eggs is increasing rapidly but their production is not keeping pace with it. The angora wool rabbit rearing technology also tried out in the Dhauladhar Project has opened up new avenues for generating income and providing gainful employment to farmers in Himachal Pradesh.

Fish production has a great potential in terms of animal protein supplement. Himachal Pradesh can benefit by exploiting its substantial water resources for fish farming especially trouts. There are many other possibilities that the specialists of this University certainly know much better than any visitor.

I shall not go into further details but rather note with satisfaction that the scientists of the University are doing useful research not only at the Headquarters of the University but also at various research stations located throughout the state. It is a matter of great pride that the sustained and dedicated efforts of the scientists of this University have resulted in the identification of a number of crop varieties and standardisation of agro-techniques, besides the improvement in the cattle health of the state. The scientists should be congratulated and complimented for evolving new crop and fodder varieties. It is also a matter of appreciation that the University has successfully established a linkage between agricultural research and extension through organisation of zonal workshops, field days, training programmes as part of T & V programmes, crop demonstrations and exhibitions. The Lab to Land programme undertaken by the University is an excellent programme where farmers are motivated to follow improved practices on crop husbandry and animal production.

This pragmatic approach geared to the needs of the rural people living in various agro-climatic zones and in often remote areas of this hill state should be pursued vigorously. It is fully consistent with the new trend of rural development policies during the 8th Plan and with international experience.

INDIAN INSTITUTE OF TECHNOLOGY, BOMBAY
School of Biomedical Engineering

BIOMEET '93
(Biomedical Engineering Entrance Test)
for
Medical Graduates seeking admission with scholarship
to
M.Tech/Ph.D Programme in Biomedical Engineering

ELIGIBILITY: MBBS degree holders, those undergoing internship and those due to appear for final MBBS examination in April-May 1993. Knowledge of Mathematics upto XII Std. is required.

APPLICATION: Forms and Information brochure can be obtained by post from Chairman, GATE, Indian Institute of Technology, Powai, Bombay 400 076 by enclosing two 5 x 10 cms slips with your address written neatly and a crossed draft of Rs. 50/- drawn in favour of Indian Institute of Technology, Bombay and payable at Bombay OR in person from the GATE Office against a crossed Demand Draft only.

EXAMINATION CENTRES: IIT Bombay, IIT Delhi, IIT Kharagpur, IIT Kanpur, IIT Madras, IISc. Bangalore.

FORMS: Issue of forms from 12th Oct '92 to 13th Nov '92 (by post) and 27th Nov. '92 (at counter) and last date to receive completed application forms: 9th Dec '92

Date of Examination: 14th February 1993.

NOTE
1. Candidates from engineering and physical sciences should appear for GATE for admission to the above programme. Knowledge of Biology upto XII Std. is desirable in the case of such candidates.
2. Besides qualifying through BIOMEET/GATE, the candidates must satisfy other requirements before admission.

Avinashilingam Institute Convocation

Prof. G. Ram Reddy, Chairman of the University Grants Commission(UGC) said that despite the efforts made by the Central and State Governments, the position of women in education was far from satisfactory in the country. He was delivering the fourth annual convocation address of the Avinashilingam Institute for Home Science and Higher Education for Women (Deemed University). Prof. Reddy said the rootcause of inequality of sexes was due to socialisation process and the traditional prejudices strengthened through curricular differentiation. A study of school curricula revealed that strong sex bias existed in 22 English and 20 Hindi textbooks prescribed by the Government for more than 30 lakh students in some States.

However attempts had been made by the Central Government and organisations like the NCERT to eliminate the bias in textbooks. The Central Government had recently revised the action plan to enhance women's status and further their development in all sectors. The National Policy on Education had categorically stated that education would be used as an agent of basic change in the women's status and in order to neutralise the accumulated distortions of the past, there would be a well conceived edge in favour of women. Although women constituted 48 percent of the population, the female literacy was only about 39.42 percent. In Kerala women's literacy rate was as high as 87 percent compared to 94 percent among men. On the other hand in Rajasthan and Bihar the literacy level among women was about 20 percent to 23 percent.

Prof. Reddy commended the innovative programmes introduced by the Avinashilingam deemed university to make education meaningful to women.

Dr. Rajammal P. Devadas, Vice-Chancellor of the University, said the new courses for women had been introduced keeping in view the new role they had been called upon to play on par with men to bring about a social reformation. "Under the FAO-sponsored project for improvement of post-harvest technology in the rural areas of Tamil Nadu, food preservation units would be set up in eight pilot districts of the State. She also said there was a proposal to start M.B.A., and masters degree courses in applied chemistry and undergraduate courses in physical education in 1993-94.

Mr. C. Subramaniam, Chancellor of the University and Governor of Maharashtra, who presided over the convocation, called upon the youth and the women graduates passing out of this institution to develop positive thinking and channelise their energies to bring about economic development.

Mr. Subramaniam emphasised the need for adapting to changes without sacrificing values.

Italian Aid to Karnatak Varsity

The Ministries of Human Resource Development of External Affairs are reported to have given their approval for a Lira 5.2 billion (Rs. 6 to 7 crore) assistance from the ITA Schools of Italy to the Karnatak University for starting a school of micro-electronics. According to Vice-Chancellor Dr. S. Ramegowda, the assistance will be in the form of manpower and material connected to areas like telecommunications, computer science, fibre optics and digital instrumentation. The University school is to serve as a resource centre, where "extensive research and development work will be undertaken" for the benefit of the "entire region". The UGC has already cleared the project.

Dr. Ramegowda disclosed that the University had signed a memorandum of understanding with the Nuclear Power Corporation for with for undertaking research work to find out the incidence, if any, of nuclear diffusion, and its effect on the marine life in the Kaiga Nuclear Power Project area. As much as Rs. 6 lakh of the Rs. 20-lakh project had been released by the NPC as the first instalment, he added.

The Vice-Chancellor said the university would host a three-week "School in Lasers and Optics on Ultrafast Phenomena" from November 16. Top international and Indian experts in the field of laser spectroscopy had been invited to lead the school. As many as 40 participants from various organisations all over the country would be benefited by the programme, he said.

Karnatak University is the first university in the country which has been sanctioned the laser spectroscopy programme by the Defence Research and Development Organisation. A few universities in China have come forth for having a collaboration with this programme, sponsored by the DRDO.

Dr. Ramegowda said with the establishment of an University Centre at Bijapur, offering one-year diploma courses in Art History, the country would have the first institution of its kind where, as a student, "you will have great temples like the Badami, Pattadakallu and Aihole as laboratories". The centre will start functioning this academic year itself with 20 students. The Vice-Chancellor said from the next year onwards 50 percent of the school's intake would be foreigners.

Ambedkar Open Varsity Decennial Celebrations

The AndhraPradesh Governor, Mr. Krishan Kant, stressed the need for imparting professional and technical skills to the people through the open university system. Mr. Krishan Kant, who was the chief guest at the decennial celebrations of Dr. B.R. Ambedkar Open University said the open university concept filled a sizeable gap in the demand for educational opportunities and its availability.

He added the time was now ripe for the Ambedkar Open University to deviate from the conventional type of educational system and "venture into more contemporary areas of science and technology, mathematics, both pure and applied and development of professional and technical skills."

Delivering the decennial lecture on 'developments in distance education', Prof. G. Ram Reddy, Chairman, University Grants Commission, said that unlike in the conventional system of education, there was tremendous scope for cooperation between and among the distance education institutions within the country and also internationally.

Dr. C. Narayana Reddy, Vice-Chancellor of the Telugu University lauded the role of open university system which, he said, was imparting education to all sections of the people, especially housewives.

Prof. R.V.R. Chandrasekhara Rao, Vice Chancellor, Dr. B.R. Ambedkar Open University, expressed his gratitude to all those who had helped in enhancing the image of the institution.

Earlier, the Governor felictated Mr. Bhavanam Venkatram, former Chief Minister, Mr. K. Keshava Rao, former Education Minister, Prof G. Ram Reddy and Dr. C. Narayana Reddy for their immense contributions to the development of Dr. B. R. Ambedkar Open University. On the occasion, the Education Minister also released a brochure 'development over a decade' brought out by the open university.

40th All India English Teachers' Conference

The Indian Association for English Studies, proposes to organise its 40th All India English Teachers' Conference at Sri Krishnadevaraya University, Anantapur, from 28th to 30th December, 1992. The Conference will be inaugurated by Prof. G. Ram Reddy, Chairman, UGC and is expected to be attended by over 500 delegates from all over the country. Prof. M.J. Kesava Murthy, Vice-Chancellor, will preside over the conference.

Indira Gandhi National Open University

Schedule of Telecast for the period 1 October to 30 October 1992
6.30 a.m. to 7.00 a.m.

Date/Day	Academic Programme	Title of the Course
2.10.92 Friday	Management	New Product Launch
5.10.92 Monday	Bachelor's Degree Programme	Ghurni Nirdeshantra
7.10.92 Wednesday	Bachelor of Library & Info. Science	Colon Classification II
9.10.92 Friday	Management	Developing a National Level Advertising Campaign
12.10.92 Monday	Bachelor's Degree Programme	Measures of Dispersion
14.10.92 Friday	Higher Education	Teacher as a Manager
16.10.92 Friday	Management	Globalisation of Markets – Canadian Perspective
19.10.92 Monday	Bachelor's Degree Programme	Apikaran ka Maap
21.10.92 Wednesday	Certificate in Food and Nutrition	1. Apna Bhojan Kitna Surakshit 2. Open Channel
23.10.92 Friday	Management	Memorandum of Understanding Pt. I
26.10.92 Monday	Bachelor's Degree Programme	Reconstruction of the Past
28.10.92 Wednesday	Computers in Office Management	Communication in the Office Pt. III
30.10.92 Friday	Management	Memorandum of Understanding Pt. II

The theme of the conference is Modern Trends in English Literature and New Literatures in English. The delegates will present Research Papers on various aspects of different literatures in English. Besides, there will be plenary sessions on Comparative Literature, Commonwealth Literature and Indian Literature in English.

The special features of the Conference are a lecture on Shelley by a British expert to mark Shelley's bicentenary and a session on Gurajada Apparao's *Kanyasulkam* to mark its production centenary.

Further details may be obtained from Prof. K. Venkata Reddy, Prof. of English, Sri Krishnadevarya University, Anantapur- 515003.

Value Education Workshops

Rosary College, Navelim, Goa recently conducted a series of Value Education workshops for all its students, as part of the curriculum. Inaugurating the workshop Sr. Margaret, Head of Department of Chemistry of Carmel College, remarked that all educational institutions should conduct similar workshops so that our students were imbued with values right from their childhood. Their subsequent work and activities would have a sense of direction and purpose because they were guided by a set of values.

Speaking on the occasion Principal Newman Fernandes said that this was a purposeful step towards the formation of students entrusted to them. "In order to discharge our responsibility we must not concentrate only on the syllabus and exams but towards total development of students which was meaningful only when their life governed by values." All faculty members should avail of their regular lectures to impart values. In addition these workshops would give an opportunity to students for value clarification and value building through interaction and discussion, he added.

Summer Institute In Phonetics and Phonology

The Central Institute of English & Foreign Languages, (CIEFL) Hyderabad, in collaboration with Telugu University, and Osmania University, organised a three-week International Summer Institute in Phonetics and Phonology. Professor S.K. Verma, Vice- Chancellor, CIEFL, inaugurated the Institute.

The Summer Institute covered a wide range of areas, namely, Articulatory Phonetics, Experimental Phonetics, Acoustic Phonetics, Educational Phonetics, Speech Synthesis, Text-to-Speech by Machines for Indian Languages, Generative Phonology, Prosodic Phonology, Systemic Phonology, Non-Linear Phonology, Lexical Phonology, Phonetics Ancient Indian Traditions, Sandhi in Panini, The Contribution of Tolkappiyar, and Bangla Phonetics and Phonology.

In addition to the academia sessions, there were paper-presentation sessions during which papers on the research done and being done on Indian languages were presented.

Fifty six teachers/research scholars attended the Summer Institute as participants. Prof. George N. Clements, Cornell University, Dr. John Harris, London University, Prof. George Cardona, University of Pennsylvania, Prof. Mansoor Musa, University of Dhaka, Bangladesh, Dr. Begum Jehan Ara, University of Dhaka, Bangladesh, Prof. Peri Bhaskara Rao, Deccan College, Poona, Prof. B.Yegnanarayana, IIT, Madras, Prof. S.S.Joshi, Punjabi University, Patiala, Prof. K. Murugaiyan, Annamalai University, Dr. Promod Kumar Pandey, University of Sana'a, Yemen, Dr. Nagamma Reddy, Osmania University, Prof. J.P.Dimri, CIEFL, Prof. V. Prakasam, CIEFL, Prof. B.V.L. Narayanarow, CIEFL, Dr. Kamlesh Sadanand, CIEFL, Dr. P.V. Dhamija, CIEFL, Dr. B.A. Prabhakar Babu, CIEFL, and Dr. K.G. Vijayakrishnan, CIEFL, acted as Resource Persons.

News from Agricultural Universities

Workshop on Seed Technology Research

The participants to the Ninth All India Seed Technology Research Workshop held recently at the Choudhry Charan Singh Haryana Agricultural University recommended collaborative efforts on the part of governmental and private seed producing agencies, corporations and progressive farmers so that hybrid seed production programme could be made popular in the north India to enable them to get the required quantity of the improved seed. The participants felt that at present the hybrid seed production of different crops was confined to the southern states of the country as a result the farmers of this part had to pay dearly in buying the improved seeds.

The participants further resolved that seed being critical component for agricultural growth of the country, the basic research on the different aspects of quality seeds, such as seed production, seed health, seed physiology, seed quality and seed storage should be accelerated and all the required facilities should be made available to the researchers on priority basis.

The extension of latest information pertaining to seed health was another major aspect on which the participants expressed their views so that the farmers were made aware with the identification of good quality seeds. How and when to store the good quality seeds for longer period without incurring any additional cost was also discussed during these two days deleberations.

According to Dr. B.S. Dahiya, Coordinator of this workshop, the participants desired that seed technology centre of Chaudhry Charan Singh Haryana Agricultural University, being a centre of excellence, should intensify this training programme.

The workshop was attended by over 140 delegates from all over India. The participants included seed researchers from different institutes from ICAR, agricultural universities, Managing Director of seed producing corporations, seed certifying agencies, officials of private seed sectors, eminent scientists and progressive farmers.

News from UGC

Countrywide Classroom Programme

Between 16th October to 23rd October, 1992 the following schedule of telecast on higher education through INSAT-1D under the auspices of the University Grants Comission will be observed. The programme is presented in two sets of one hour duratilon each every day from 1.00 p.m. to 2.00 p.m. and 4.00 p.m. to 5.00 p.m. The programme is available on the TV Network thoughout the country.

Ist Transmission

1.00 p.m. to 2.00 p.m.

16.10.92

"Mobius Band"

"Anuradha - The Cosmic Searcher"

"Imbibing Global Ecology - A "Unique Experiment in Learning"

17.10.92

"Nrityaganga-II"

"The Transformable Halls"

"Week Ahead"

18.10.92

No Telecast

19.10.92

"Oscillation of Waves"

"Jojoba : A Future Plant-II"

"Work Ethos in Management"

20.10.92

"Preparing a Standard Solution"

"You and Your Blood Pressure"

"Echograpy"

21.10.92

" In Vitro Vegetative Multiplication"

" Biology of Millipedes"

" Stress Without Duress"

22.10.92

"Emma"

"19th Century Russian Literature: Ivan S. Turgenev"

"Borrowings in English: The French Connection-II"

23.10.92

"Waste Disposal"

"India in Space - Achievements and Prospects"

"Mharo Rajasthan"

IInd Transmission

4.00 p.m. to 5.00 p.m.

16.10.92

"Squares, Cubes and Powers"

"University goes to Village-I: The Beginning"

"Rights and Wrongs - Conscience Development"

17.10.92

"A Gateway to Americana"

"Music Imageries in Tagore Literature"

"Week Ahead"

18.10.92

No Telecast

19.10.92

"Photoelectric Effect-II"

"Biological Control of Rice Diseases:Blast and Sheath Blight-II"

"External Borrowing-I: The Need to Borrow"

20.10.92

"Use of Computers in Education-II"

"Hepatitis B: Major Professional Risk"

"Malaria Control in Madras"

21.10.92

"The Emperors Paradox"

"Sewage Treatment"

"Vitamins D: Sunshine Asset"

22.10.92

"Tagore in the Hispanic World"

"Celebration of Spring-II"

"The Story of Words-I"

23.10.92

"Vedic Mathematics-VII : Squares and Square Roots by Yavadunam Tavaduni Kritya Varaganika Yojayet Sutra"

"University Goes to Village-II : A Decade Ahead"

"Defence Mechanisms"

National Conference on Physical Education

The Avinashilingam Institute for Home Science and Higher Education for Women in Coimbatore recently organised a National Conference on "Physical Education: Key to Health, Fitness and Excellence in Sports".

The objectives of the Conference were to (1) create an opportunity and better environment for the upliftment of academic status of physical education, (2) emphasise the importance of health, nutrition, fitness and their relationships to human performance; (3) examine the possibilities of integrating physical education with the curriculum; (4) consider educating administrators for effective implementation of physical education programmes; (5) identify ways and means of propagating and promoting mass participation in sports; and (6) identify ways and means of involving the media.

Dr. Dorothy Sakrajsek, Director, School of Health, Physical Education and Recreation, Ohio State University, U.S.A inaugurated the conference. In her address she brought out how the daily behaviour of many people affected health more than such factors as genetics, physical environment or medical intervention. Education must educate people to reach their fullest potential in living a good life. Physical Education must concentrate on what we can 'be' with physical activity and not on what we can 'do' with physical activity.

Dr. Rajammal P. Devadas, Vice-Chancellor, Avinashilingam Deemed University, in her presidential and keynote address stressed the importance of framing a national policy on physical education particularly for student youth. The state governments and universities needed to be advised on matters relating to integration of physical education with general education, she said. Her paper entitled "Needed - A Quantum Jump for Sports Activities from the Grassroot Level" emphasised the need for focussing more on sports from childhood.

The papers presented and discussed at the conference included (1) Sports Management – What is it?; (2) Physical fitness is a lifetime asset; (3) Prevention and modern treatment of sports injuries; (4) Physical fitness – its importance and benefits; (5) Physical education and coaching – an inter-disciplinary effort; (6) Posture – its importance in fitness and excellence in physical activities; (7) Physical fitness for the handicapped students; (8) Comparison of achievement motivation between high and low physical fitness groups of the university students; (9) Exercise – an integral component in health and disease; (10) Specialisation is the key to excellence in sports; (11) Factors influencing sports performance; (12) Trends of physical education and sports in India; (13) Childhood physical education – health perspective; (14) Can women equal the performance of men in athletics.

After detailed discussion the following recommendations were made :

(1) health and physical education may be made curricular subjects at all levels of education (primary, secondary, higher secondary schools and colleges);

(2) physical education may be made a compulsory subject at all levels;

(3) promotion to a higher class may be made contingent on getting a passing grade in physical education; such grading be based on mandatory periodical fitness and sports tests;

(4) greater emphasis may be placed on delivering physical activity programmes for all the disabled persons;

(5) constitute a national committee to evaluate the present methods of teaching physical education and coaching techniques in India;

(6) maintain uniformity in the curriculum of professional preparation at undergraduate and postgraduate levels, and use the same nomenclature;

(7) introduce a Four Year Degree course to further the quality of professional preparation;

(8) make 'health and physical education' a core subject (instead of an elective subject) in B.Ed. syllabus which would enable all teachers to offer physical education classes, as and when necessary;

(9) every educational institution must have a department of physical education;

(10) the physical education personnel should be treated at par with the teaching staff of the university and college in terms of pay scales and other service conditions;

(11) the physical education personnel must have the same promotional avenues as other teachers subject to the possession of required qualifications;

(12) reserving 5 percent of seats in different courses in colleges and universities for sports persons if they possess the minimum marks required;

(13) institute separate programmes for the talented sports persons to enable them to pursue excellence in sports at higher levels;

(14) giving awards to outstanding sports persons;

(15) holders of B.Ed., M.P.Ed., B.P.E., M.P.E. and M.P.Es. degrees may be admitted to regular coaching courses offered by the National Institute of Sports without the requirement of representation on university, state or national teams;

(16) Sports Authority of India (SAI) should be the supervisory body for physical education and sports in India;

(17) the SAI should appoint an appropriate body for evaluation, accreditation and certification of programmes in physical education and sport;

(18) physical education should be included as one of the subjects for competitive examinations of the Union and State Public Service Commissions; and

(19) the mass media including T.V should play an active role in popularising physical education and sports by publishing and telecasting teaching, training and coaching in various sports.

Eighty participants, mostly Directors and Professors of Physical Education, drawn from 20 universities representing 10 states attended the conference.

News from Abroad

The Lure of the Deep South

Why would Indian students want to go the Tasmania in the far south of Australia to study one might ask. The island is isolated, sparsely populated and cold in Winter.

You might be surprised to learn that the island is not only home to one of Australia's older and more prestigious universities but also home to Australia's national institution for maritime education and training – the Australian Maritime College (AMC). These institutions have put Tasmania on the map as an education destination for students worldwide. The AMC in particular has gained a reputation as a regional centre for excellence in matters maritime in the Asia Pacific region attracting students from throughout the region and as far away in Nigeria.

The Australian Maritime College was established by the Australian Government in 1978 to provide education and training for the Australian shipping and fishing industries. The College has, arguably, the finest facilities of any maritime institution in the Southern Hemisphere including navigation and fisheries training vessels, a ship simulator, a towing tank for testing ship hull forms and a flume tank in which various arrays of fishing gear can be trialled. The College's outreach to the surrounding region was recognised recently by the designation of the College as Australia's Asia Pacific Maritime Centre. Excellence in teaching and research has also been recognised by the designation of the College as the centre and core partner of the Australian Maritime Engineering Co-operative Research Centre involving a total of 27 other university and industry participants.

In 1991 the AMC was home to 62 students from India and another 28 from Pakistan and Bangladesh. These students were mainly practising seafarers who came to the AMC to increase their professional knowledge as deck officers and marine engineers and to gain professional qualifications that would enable them to undertake higher ranking positions in the international maritime fleet. Classroom studies at the College are augmented by skills acquisition through the use of equipment such as the shiphandling simulator, the radar simulator and the diesel engine simulator. These skills are put to the test in practical sessions on the training vessel and at facilities such as the survival centre and firefighting centre.

Other overseas students take advantage of the postgraduate courses available in shipping business, in port and terminal management and in fish harvesting, fishing technology and marketing; bachelor's degree courses in naval architecture, maritime engineering and fisheries; and diploma and short course in areas such as electronics, firefighting, cargo-handling and the use of navigational aids.

A growing number of staff from maritime institutions in the region are also visiting the College to undertake research projects using the facilities and expertise available at the College. Projects currently being undertaken include research into the seakeeping behaviour of fishing vessels, the development of more reliable mathematical models to predict the behaviour of large bulk carriers and the development of electronic navigation aids. The variety of facilities available enables correlation of results to be undertaken. For instance, the performance of hull forms in the towing tank can be cross referenced against mathematical models trialled on the simulator. An outcome of this applied research has been the involvement of the College in a number of port development and pilot training projects in the Asia Pacific region.

You can see then why there is the incentive to head south. The opportunity to study at an institution of international repute and to enjoy the relaxed, clean, lifestyle of one of the undiscovered gems of the south is becoming an increasing drawcard for students from the Asia Pacific region.

We Congratulate . . . .

1. Prof. M.Malla Reddy who has been appointed Vice-Chancellor of the Osmania University, Hyderabad.

2. Dr. V. Gnanaprakasam who has been appointed Vice-Chancellor of the Tamil Nadu Veterinary and Animal Sciences University, Madras.

THESES OF THE MONTH

A list of doctoral theses accepted by Indian Universities

BIOLOGICAL SCIENCES

Anthropology

1. Srinivasulu, T. **Genetic differentiation of the Yamadi tribe: A study of anthropometric and dermatoglyphic variations in relation to acocultural diversities.** Calcutta.

Environmental Sciences

1. Manju, M R. **Studies on the effect of selected metals on the productivity of two species of algae.** CUST. Dr K P Balakrishnan, Prof (Retd), School of Environmental Studies, Cochin University of Science and Technology, Kochi.

2. Zachariah, John Kompithra. **Geochemistry and petrogenesis of amphibolites of Ramagiri Gold Fields, South India.** JNU. Prof V Rajamani, School of Environmental Sciences, Jawaharlal Nehru University, Delhi.

Biology

1. Kunhikrishnan Nair, C. **Chemical partitioning of trace metals in sediments of a tropical estuary.** CUST. Dr Jacob Chacko, Head, Chemical Oceanography Division, School of Marine Sciences, Cochin University of Science and Technology, Kochi.

2. Reethamma, O V. **Electrophoretic, biochemical and morphometric studies on three bivalves of Cochin and nearby waters.** CUST. Dr C K Radhakrishnan, Lecturer, School of Marine Sciences, Cochin University of Science and Technology, Kochi.

3. Shiny Sreedhar, K. **Studies on the biology of the bivalve** Musculista senhausia **Benson from Cochin waters.** CUST. Dr C K Radhakrishnan, Senior Lecturer, School of Marine Sciences, Cochin University of Science and Technology, Kochi.

Biochemistry

1. Gupta, Reena. **Studies on epithelial cell surface glycosylation in mice intestine: Effect of different nutritional regimens.** Panjab.

2. Hemant Kumar. **Immune protection studies in experimental leishmaniasis.** AMU. Prof Sohail Ahmad.

3. Kaushal, Sumesh. **Isolation and properties of** Clerodendron **seed lectin.** Punjabi. Dr P K Sehajpal, Lecturer, Department of Human Biology, Punjabi University, Patiala and Dr K S Sidhu, Prof, Department of Chemistry, Punjabi University, Patiala.

4. Lakshmi, R. **Wound healing in riboflavin or pyridoxine deficient rat.** Osmania.

5. Naseem Akthar Mohammed. **Metal toxicity in fungi: The role of cellwalls in metal detoxification and their possible application as biosorbents for metals.** Osmania.

6. Nirmala, Y. **Studies on opioid receptor:Subcellular distribution, solubilization and purification.** Osmania.

7. Sarma, Archana. **Biomethanation of waste biomass.** Gauhati. Dr H D Singh, Deputy Director, Biochemistry Division, Regional Research Laboratory, Jorhat and Dr A Choudhuri, Prof (Retd), Gauhati University, Guwahati.

8. Sena, Syed Ali. **Role of haptoglobin in certain metabolic disorders.** Devi Ahilya. Dr A P Bhandkar, D Y P E S Medical College, Kolhapur.

✓9. Vadiraj, S. **Biochemical studies on sorghum,** Sorghum bicolor **(L) Moench.** Gulbarga. Dr V H Muliman, Chairman, Department of Biochemistry, Gulbarga University, Gulbarga.

10. Zaidi, Asma. **Studies on calmodulin and some membrane proteins of goat erythrocyte.** AMU. Prof M Saleemuddin, Department of Biochemistry, Aligarh Muslim University, Aligarh.

Microbiology

1. Nautamlal, Yagnik Bhupeshkumar. **Studies on microbial degradation of lignin.** Gujarat. Dr S G Desai, Head, Department of Microbiology, University School of Sciences, Gujarat University, Ahmedabad.

2. Pande, Sunil Sohanlalji. **Studies in relation to biological control of housefly.** Nagpur. Dr S U Meshram, Department of Microbiology, Nagpur University, Nagpur.

Botany

1. Ayer, Saraswati K. **Impact of industrial air-pollution on some cereal crops.** Baroda.

2. Bansal, Manju. **Microbial ecology of** Leucaena leucocephala **root in relation to soil fertility.** Delhi.

3. Chattopadhyay, Aditi. **Studies on** in vitro **culture of** Nigella sativa **Linn and** Nigella damascena **cultivar** Miss Jeckyll. Calcutta.

4. Deori, Ratneswar. **Studies on disease reaction on selected economic plants from Sibsagar District of Assam with reference to Ascomycetous fungi.** Gauhati. Dr D N Baishya, Prof, Department of Botany, Gauhati University, Guwahati.

5. Inderjeet Singh. **Studies on gametogenesis, seed development and pericarp in some Himalayan orchids.** HP.

6. Janaki Kumari. **Mutational and biochemical studies in certain varieties of** Helianthus annus L. Osmania.

7. Joshi, Pratima. **Ecology of waste water of dairy plant and its potential for methane generation and algal growth.** Vikram. Dr S K Billore, Prof, Department of Botany, Vikram University, Ujjain.

8. Khare, Vandana. **Studies on soft rot diseases of fruits with special reference to their pathological and enzymological studies and control measures.** HS Gour. Dr Pradeep Mehta, Department of Botany, Dr Hari Singh Gour Vishwavidyalaya, Sagar.

9. Kumaria, Suman. In vitro **propagation of** Dendrobium fimbriatum var. oculatum HK F: **Some functional and biochemical aspects of its growth.** NEHU. Dr Pramod Tandon, Department of Botany, North-Eastern Hill University, Shillong.

10. Malhotra, Shramja. **Microflora associated with decay in living trees of** Picea smithiana **(Wall) Boiss.** HP.

11. Murugan, N. **Monitoring waterlogged areas of Khambat Taluka using satellite remote sensing and amelioration of its**

effects on the groups. Baroda.

12. Quazi Taheruzzaman. **Enrichment of water bodies and its effect on the productivity of some aquatic plants.** Burdwan. Dr Debiprasad Kushari, Reader, Department of Botany, University of Burdwan, Burdwan.

13. Rao, Prathima. **Ecology of gap phase regeneration in a subtropical broadleaved climax forest of Meghalaya.** NEHU. Dr H N Pandey, Department of Botany, North-Eastern Hill University, Shillong.

✓14. Ratnawat, Jyoti. **Mycoflora of groundnut and its products with special reference to biodeterioration and toxin production.** Vikram. Dr O P Mal, Reader, Department of Botany, Vikram University, Ujjain.

15. Saha, Rinku. **Establishment and characterization of cell lines of Japanese mint.** Calcutta.

16. Sanish, S. **Studies on salicornia.** Bhavnagar. Dr E R R Iyengar.

17. Sapru, Tripti. **Studies on root rot and leaf blight of mung bean with special reference to physiology of diseases.** Vikram. Dr O P Mal, Prof, Department of Botany, Vikram University, Ujjain.

18. Thounaojam, Basundhara. **Investigation on the biochemical and physiological aspects of the wood-rotting fungus,** Clitocybe multiceps **Peck and its host-pathogen relationship.** Manipur. Dr G A Shantibala Devi, Asstt Prof, Department of Life Sciences, Manipur University, Manipur.

19. Varghese, Scaria K. In vitro **studies in some medicinal plants.** Patel. Prof J A Inamdar (Retd), Department of Biosciences, Sardar Patel University, Vallabh Vidyanagar and Dr (Mrs) Kiran Kalia, Department of Biosciences, Sardar Patel University, Vallabh Vidyanagar.

Agriculture

1. Ajay Kumar. **Population dynamics of cabbage white butterfly** Pieris brassicae Linn **(Pieridae: Lepidoptera) on cabbage and cauliflower.** YS Parmar. Dr O P Bhalla.

2. Ashwani Kumar. **Studies on hybrid seed production technology and varietal identification in pearlmillet,** Pennisetum typhoides **(Burm) Stopf and Hubb.** HAU.

3. Biswas, Dilip Kumar. **Studies on the effects of repeated and seasonal application of herbicides on the succeeding crops in rotation with jute.** Calcutta.

4. Daniel, C Thilagavathy. **Evaluation of certain wild seed kernals as protein supplement in the feed of Indian major carp,** Cirrhinus mrigala **Hamilton.** Gandhigram. Dr Samel Paulraj, Head, Department of Natural Resources and Waste Recycling, Madurai Kamaraj University, Madurai.

5. George, V C. **Studies on prawn gill nets of the Kerala Coast.** CUST. Dr C T Samuel, Prof (Retd), Department of Industrial Fisheries, Cochin University of Science and Technology, Kochi.

6. Gurinder Singh. **Response to selection for some morphological and pathological traits in a composite variety of maize,** Zea mays L. PAU.

7. Harjapinder Singh. **Biological studies on blister beetle,** Mylabris phalerata **(Pallas).** PAU.

8. Hawa Singh. **Epidemiology and management of red rot of sugarcane caused by** Colletotrichum falcatum **Went.** HAU.

9. Kulthe, Kashinath Sonajirao. **Identification and characterization of sap transmissible viruses associated with churda murda disorder of chillies.** Marathwada. Dr V R Mali, Head, Department of Plant Pathology, Marathwada Agricultural University, Parbhani.

10. Lenka, Nibedita. **Genotypic basis and role of hormones and media in callusing and efficient green plant regeneration from anthers of** indica **rice.** Osmania.

11. Nandal, Jai Kanwar. **Response of polythene cover in relation to phosphorus and potash nutrition for production of spring crop of tomato.** HAU.

12. Ray, Sanjay Kumar. **Novel slow-releasing micronutrient fertilizers: Formulation, synthesis and applicability.** Calcutta.

13. Sethi, Parveen. **Induction and characterisation of male sterile mutants of wheat,** Triticum aestivum. PAU.

14. Sood, Meenu. **Screening of** Valeriana jatamansi **Jones collections for valepotriates content and development of cultivation techniques for the promising collection.** Y S Parmar. Dr L J Srivastava, Department of Forest Products and Utilization, College of Forestry, Nauni (Solan).

Zoology

1. Baskaran, G. **Studies on the hypothalamo hypophysial neurosecretary complex and the pituitary of some teleostean fishes.** Pondicherry. Dr E Vijayan, School of Life Sciences, Pondicherry University, Pondicherry.

2. Bhatia, Arvinder. **Effect of electroplating effluent on the reproductive biology of** Channa punctatus **Bl and** Cyprinus carpio **Linn.** PAU.

3. Chakrabarti, Prabir. **Ecology of soil inhabiting microarthropods of a rubber plantation and an adjacent wasteland in Tripura.** Calcutta.

4. Das, Mihirlal. **A study on the morphology, ecology and control of** Dialeurodes pallida **Singh (Aleyrodidae: Hemiptera) in Tripura.** Calcutta.

5. De, Alok. **Studies on the kinetoplastid flagellates with special reference to its affinity with the closely related photogenic forms.** Calcutta.

6. Deshmukh, Chitrarekha Prabhakarrao. **Studies on digestive system of the fruit sucking moth,** Othreis materna Linn **(Lepidoptera: Noctuidae).** Nagpur. Dr D B Tembhare, Department of Zoology, Nagpur University, Nagpur.

7. Jayasree, P R. **Effect of caffeine on UV-irradiated cells with special reference to mitosis.** Calicut. Dr R Vimala Nair, Department of Zoology, University of Calicut, Calicut.

8. Pal, Debasish. **Studies on the interaction of some common sewage borne bacteria with the defence system of mrigal,** Cirrhinus mrigala **in the East Calcutta sewagefed ponds, India.** Calcutta.

9. Ray, Jayanta Kumar. **Factors influencing predation of the waterbugs** Sphaerodema annulatum **Fab on the disease transmitting snail,** Lymnaea (Radix) luteola **Lamarck.** Calcutta.

10. Samanta, Devi Prasad. **Toxicological effects of a mercury based fungicide on a fresh water fish,** Tilapia mossambica **Peters and its ecological implication.** Berhampur. Dr Ashok Kumar Panigrahy, Reader, Department of Botany, Berhampur University, Berhampur.

11. Sebastian, Saji. **Studies on certain aspects of functional anatomy and behaviour of a few snakes.** Mahatma Gandhi. Dr V C Thomas, Department of Zoology, SS Berchman's College, Changanacherry.

12. Udoh, Paul Bassey. **Histopathological and biochemical effects and mechanism of action of some potent male antifertility drugs in albino rats.** Nagpur. Prof D R Patil, Department of Zoology, Nagpur University, Nagpur and Prof M K Deshpande, Department of Biochemistry, Nagpur University, Nagpur.

13. Vijayalakshmi, M. **Ecophysiological studies on the reproduction of** Poecilia reticulata Peters (Poeciliidae: Pisces). Bangalore. Dr Katre Shakuntala, Prof, Department of Zoology, Bangalore University, Bangalore.

Medical Sciences

1. Baral, Mohanchand. **Studies on erythropoiesis in the toad.** D.Sc. Calcutta.

2. Capoor, Adarsh Krishna. **Potentiation of immune response by liposome entrapped antigen (s).** JNU. Dr Om Singh and Prof G P Talwar.

3. Chattopadhyay, Swati. **Cerebellar influence on salivary secretion.** Calcutta.

4. Chaudhuri, Nabendu. **Studies of the efficacy of digitals and calcium channel blocker in different types of cardiovascular disorder.** Calcutta.

5. De, Srabani. **Enzymatic induction by thyroid hormone in brain of singi fish,** Heteropneustes fossilis **Bloch.** Calcutta.

6. Jain, Sadhna. **Environmental, biochemical and immunological aspects of thermophilic actinomycetes.** Delhi.

7. Puranik, Prashant Keshaorao. **Evaluation of abietic acid and abietic acid derivatives as materials for microencapsulation.** Nagpur. Dr A K Dorle, Department of Pharmaceutical Sciences, Nagpur University, Nagpur.

8. Ravichandran, R. **Development of non-invasive biophysical methods for objective and quantitative evaluation of tumor response to treatment.** Bangalore. Dr V K Jain, Prof, Department of Biophysics, National Institute of Mental Health and Neuro-Sciences, Bangalore.

9. Sekar, C. **Studies on the immobilization of** Tolypocladium sp **for the production of cyclosporin A and its mechanism of biosynthesis.** Pondicherry. Dr K Balaraman, Vector Control Research Centre, Pondicherry.

10. Shandil, Radha Krishan. **Identification and purification of immune protective** Entamoeba histolytica **(HMI) protein by monoclonal antibodies.** PGI.

11. Sharma, Manoj. **Development of enzyme immunoassays for diagnosis of amoebiasis.** JNU. Dr Souravi Ghosh and Prof G P Talwar.

12. Venkateswara Rao, Jangala. **New spectrophotometric methods for the assay of some antimicrobial agents in pharmaceutical formulations.** Andhra.

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Current Documentation in Education

A list of select articles culled from periodicals received in AIU Library during September 1992

EDUCATIONAL PHILOSOPHY

Orr, David W. Problem of education. **New Directions for Hr Edn** 20(1), 1992, 3-8.

Pollack, Erwin. Profiles of educators: Isaac Leon Kandel (1881-1965). **Prospects** 21(3), 1991, 467-76.

EDUCATIONAL PSYCHOLOGY

Eley, Malcolm G. Differential adoption of study approaches within individual students. **Hr Edn** 23(3), 1992, 231-54.

Hayes, Elisabeth. Students' perceptions of women and men as learners in higher education. **Research in Hr Edn** 33(3), 1992, 377-93.

Sobral, D T. Self-report visual scale of course appeal. **Hr Edn** 23(3), 1992, 321-9.

EDUCATIONAL SOCIOLOGY

Babini, Ana Maria Eichelbaum de. Convergence and divergence of education systems in today's world. **Prospects** 21(3), 1991, 330-9.

Bok, Derek. "Making a difference": Students and community service. **Change** 24(4), 1992, 44-50.

Eisikovits, Rivka A and Karnieli, Mira. Acquiring conflict resolution skills as cultural learning: An Israeli example. **Hr Edn** 23(2), 1992, 183-94.

Hackett, Edward J and others. Industry, academe, and values of undergraduate engineers. **Research in Hr Edn** 33(3), 1992, 275-95.

Shatrugna, M. Education in Andhra. **Eco and Pol Weekly** 27(35), 1992, 1849.

Smith, April A and Gottlieb, Robert. Campus environmental audits: The UCLA experience. **New Directions for Hr Edn** 20(1), 1992, 9-17.

EDUCATIONAL PLANNING

Nanjundappa, D M. Education planning and the eighth plan. **Yojana** 36 (14&15), 1992, 64-9.

EDUCATIONAL ADMINISTRATION

Bagalay, John E. University as entrepreneur: Boston University's investment in Seragen, Inc. **Industry & Hr Edn** 6(3), 1992, 143-6.

Bok, Derek. Reclaiming the public trust. **Change** 24(4), 1992, 13-9.

Corless, James and Ward, Harold. Can brown be green? : Lessons from one university's quest for environmental responsibility. **New Directions for Hr Edn** 20(1), 1992, 45-54.

Iram, Yaacov. Centralization trends in higher education: Israel's Planning and Grants Committee. **Hr Edn** 23(1), 1992, 33-43.

Leonard, Charles. HE trading companies: Enhancing industry/HE links in the UK. **Industry & Hr Edn** 6(3), 1992, 147-50.

CURRICULUM

Rohrs, Hermann. Securing lasting world peace through peace education. **Education** 45, 1992, 7-18.

TEACHERS & TEACHING

Bieber, Jeffery P and others. Through the years: Faculty and their changing institution. **Change** 24(4), 1992, 28-35.

Collett, Jonathan and Serrano, Basilio. Stirring it up: The inclusive classroom. **New Directions for Teaching and Learning** 49 (Spring), 1992, 35-48.

Feldman, Kenneth A. College students' views of male and female college teachers: Part I- Evidence from the social laboratory and experiments. **Research in Hr Edn** 33(3), 1992, 317-75.

Kember, David and Gow, Lyn. Action research as a form of staff development in higher education. **Hr Edn** 23(3), 1992, 297-310.

Ramsden, Paul and Moses, Ingrid. Associations between research and teaching in Australian higher education. **Hr Edn** 23(3), 1992, 273-95.

Sacken, Donal Michael. Raise high the drawbridge, provost! **Ednl Record** 73(3), 1992, 38-43.

EDUCATIONAL RESEARCH

Moriarty, C Michael and Purdy, Judy B. University research: Planning for the 1990s. **Ednl Record** 73(3), 1992, 51-5.

Perry, Chad and Zuber-Skerritt, Ortun. Action research in graduate management research programs. **Hr Edn** 23(2), 1992, 195-208.

Sundre, Donna L. Specification of the content domain of faculty scholarship. **Research in Hr Edn** 33(3), 1992, 297-315.

EDUCATIONAL EVALUATION

Tan, C M. Evaluation of the use of continuous assessment in the teaching of physiology. **Hr Edn** 23(3), 1992, 255-72.

ECONOMICS OF EDUCATION

Albrecht, Douglas and Ziderman, Adrian. Student loans and alternatives: Improving the performance of deferred payment programs. **Hr Edn** 23(4), 1992, 357-74.

Chuta, E J. Student loans in Nigeria. **Hr Edn** 23(4), 1992, 443-9.

Gonzalez, Andrew. Higher education, brain drain and overseas employment in the Philippines: Towards a differentiated set of solutions. **Hr Edn** 23(1), 1992, 21-31.

Mokgwathi, G M G. Financing higher education in Botswana. **Hr Edn** 23(4), 1992, 425-31.

Woodhall, Maureen. Student loans in developing countries: Feasibility, experience and prospects for reform. **Hr Edn** 23(4), 1992, 347-56.

VOCATIONAL EDUCATION

Gomes, Candido Alberto. Vocational education financing: An example of participation by employers in Brazil. **Prospects** 21(3), 1991, 457-65.

ADULT EDUCATION

Albrecht, Hartmut. Reflections on extension work experience with the "training and visit" approach of the World Bank. **Education** 45, 1992, 37-50.

COMPARATIVE EDUCATION & COUNTRY STUDIES

Abou-Chacra, Raji. Problems of higher education in the Arab States. **Prospects** 21(3), 1991, 374-85.

Jasbir Sarjit Singh. Higher education and development: The experience of four newly industrializing countries in Asia. **Prospects** 21(3), 1991, 386-400.

Lorey, David E. Universities, public policy and economic development in Latin America: The cases of Mexico and Venezuela. **Hr Edn** 23(1), 1992, 65-78.

Maliyamkono, T L. Higher education in Eastern and Southern Africa. **Prospects** 21(3), 1991, 351-62.

Poggeler, Franz. Guidelines and problems of education unification in United Germany. **Education** 45, 1992, 51-9.

CLASSIFIED ADVERTISEMENTS

SHRI LAL BAHADUR SHASTRI RASHRTIYA SANSKRIT VIDYAPEETHA

(DEEMED TO BE UNIVERSITY)
KATWARIA SARAI, NEW DELHI-110 016

ADVERTISEMENT NO. 1/92

Shri Lal Bahadur Shastri Rashtriya Sanskrit Vidyapeetha, New Delhi-16 invites applications on the prescribed form for the following Teaching and Non-Teaching vacant positions:-

Teaching

PROFESSOR: (Rs.4500-7300) – 2 (Two)

Ved/Vyakaran/Sahitya/Jyotish/Nyaya

LECTURERS: (Rs.2200-4000) – 6(Six)

Darshan (1), Jain Darshan(1), Sankhya Yog(1), English(1),Political Science and Sociology/Economics/History(1),Hindustani Music (Vocal) (1)

Non-Teaching

PROOF READER: (Rs.1400-2300) – 1(One)

COPYIST: (Rs.1200-2040) – 1(One)

Reservation: 15% and 7.5% of the posts of Lecturers are reserved for SC and ST candidates respectively as per rules.

Prescribed application form along with general information and instructions, the posts reserved for SC and ST etc can be had from the Registrar on payment of Rs.10/- for each form either in cash on counter OR Rs.20/- by Demand draft payable in any Nationalised Bank in Delhi/New Delhi in favour of the Finance Officer, SLBSR Sanskrit Vidyapeetha, New Delhi-16. Application forms are available free of cost to the applicants belonging to SCs and STs. The last date for the receipt of duly filled in application is 15.11.92.

NEW DELHI-16 CH. SAMBAIAH
REGISTRAR

GATE 93

GRADUATE APTITUDE TEST IN ENGINEERING

Admission of Indian Nationals to postgraduate courses, (with scholarship) in Engineering/Technology/Pharmacy/Architecture at engineering colleges/ Institutes in the country will be open to only those who qualify through GATE. Candidates qualifying in GATE are also eligible for scholarships for Postgraduate programmes leading to Ph.D degrees in Engineering and Science. GATE is conducted on National basis every year. While qualifying in GATE is essential, final selection and award of scholarship will be governed by Institution offering admission. Sponsored candidates desirous of availaing of the scholarship must have qualified in GATE.

GATE is mandatory qualification for self-financing foreign students and children of Indians including Non-resident Indians, who hold Non-Indian passport but have obtained their qualifying degrees from Indian Institutions/Universities, for admission to post graduate courses. Admissions of such candidates are subject to Government of India clearance and they will not be entitled to scholarship.

Candidates appearing for GATE-93 will be required to appear for a single paper of Four or Three or Two hours duration depending upon candidates qualifications and plan of admission.

ELIGIBILITY

a) Bachelor's degree holder in Engineering/Technology/Architecture/Pharmacy & those who are in the final year of one such programme.

b) Master's degree in Agricultural Sciences/Chemistry/Computer Applications/Earth Sciences/Life Sciences/Material Sciences/Physics/Mathematics/Mineral Dressing/Statistics etc. and those who are in the final year of one such programme.
   i) If the qualifying degree is Master of Computer Applications, Bachelors' degree must be in Science and Mathematics.
   ii) If the qualifying degree is M.Sc. by research/correspondence, the degree must be obtained at the time of submitting the application form.

c) Students in second or higher of the post B.Sc. Four year integrated Master's Degree programme in Engineering/Technology or in the fourth year or higher of Five year integrated Master's degree programme in Engineering/Technology.

d) Candidates, who have successfully completed all professional qualifying examinations e.g. AMIE etc. which are recognised by UPSC as equivalent to B.E/B. Tech. for purpose of employment, are also eligible to appear in GATE. They should have completed all the requirements of their programme at the time of submitting the application form.

IMPORTANT DATES

Information Brochure and Application forms issued from	**OCTOBER 19, 1992** (MONDAY)
Last Date for Receipt of request for Application forms (by post)	**NOVEMBER 9, 1992** (MONDAY)
Last Date for Issue of Brochure and Application forms from GATE Office (all IITs/IISc.)	**NOVEMBER 27, 1992** (FRIDAY)
Last Date of receipt of completed Application forms in the respective IIT/IISc.	**NOVEMBER 30, 1992** (MONDAY)
Date of Examination	**FEBRUARY 7, 1993** (SUNDAY)

INFORMATION BROCHURE AND APPLICATION FORM

Information Brochure and Application Forms can be obtained :

1) by sending the application fee of Rs. 50/- by a crossed Bank Draft drawn in favour of IIT – payable at – (insert the place of IIT to which you are making the request) or Indian Institute of Science, Bangalore, payable at Bangalore. Such requests should be accompained by two slips of size 5cm x 10cm indicating the candidate's postal address in CAPITALS and should be addressed to the respective Chairmen, GATE, at IIT, Bombay-400076, IIT, Delhi-110016, IIT, Kanpur-208016, IIT, Kharagpur-721302, IIT, Madras-600036 or Indian Institute of Science, Bangalore-560012.

OR

2) In person from the GATE Offices of IITs and IISc Bangalore against a crossed Demand Draft/Challan as detailed above (on all working days from 10.00 a.m. to 4.00 p.m.).
   - Students from the same Institution desirous of getting a number of brochures by post/at counter may send/bring a demand draft of consolidated amount and a list of students, certified by the Head of Institution.
   - Brochures may also be made available against cash at specified branches of some banks.

SCHOOL OF CORRESPONDENCE COURSES
ANDHRA UNIVERSITY: WALTAIR

NOTIFICATION FOR SUPPLEMENTARY EXAMINATIONS OF 1992 FOR B.A./B.COM./B.SC. UNDER COMMON CORE SCHEME

The last date for the receipt of Examination Applications together with the prescribed fees for the supplementary examinations of 1992 to be held in November/December 1992 for the candidates appearing for B.A.,B.Com., and B.Sc. Degree Examinations (under Common Core Scheme) through the School of Correspondence Courses is 15th October, 1992. This notification applies to the candidates appearing under Common Core Scheme through the School of Correspondence Courses only.

The dates of commencement of B.A./B.Com./B.Sc. under Common Core Scheme are as follows:

Examination		Date of commencement of Examinations
IB.A./B.Com./B.Sc.	:	3-12-1992
IIB.A/B.Com./B.Sc.	:	24-11-1992
IIIB.A./B.Com./B.Sc.	:	12-11-1992

Applications received after the prescribed date will not be accepted. Incomplete and defective applications will be summarily rejected.

Examination application form and other particulars relating to the commencement of examinations, mode of payment of examination fee, list of examination centres, amount of examination fee etc., will be sent to all the students of the School of Correspondence Courses who are studying B.A./B.Com./B.Sc. under Common Core Scheme.

Waltair
Dt. 22-9-92

PROF. V. ABRAHAM
DIRECTOR

Common
Entrance Examination for Master of Design

a 2 Year Programme at the Industrial Design Centre, IIT Bombay

Eligibility:

Engineering	Bachelor's degree (any branch)
Architecture	Bachelor's degree
Art / Design	G D Art (5 years), BFA (Applied Art), Diploma of NID

Application Material:

please send two 5 x 10 cm slips with your address written neatly and a crossed demand draft for Rs 50/ drawn in favour of 'Indian Institute of Technology, Bombay' and payable at Bombay to:
Chairman, GATE
Indian Institute of Technology
Bombay 400 076

Test Dates:

Examination will be held on 14th February 1993 at Bombay, Delhi, Kanpur, Kharagpur, Madras and Bangalore.

Forms:

Issue of forms from 12th Oct '92 to 13th Nov '92 (by post) and 27th Nov. '92 (at counter) and last date to receive completed application forms: 9th Dec '92

1993-1994 Admissions

CEED'93
Common Entrance Examination for Design

UNIVERSITY OF GORAKHPUR, GORAKHPUR

No. 10376/92 **Dated : Sept 22, 1992**

ADVERTISEMENT NO. 3/1992

Fresh applications on the prescribed form (8 copies) available from the Office of the Registrar on payment of Rs. 10/- for the post of Professor/Reader/Librarian and Rs. 5/- for the post of Lecturers as Registration fee in cash or by Postal Order drawn in favour of the Registrar, University of Gorakhpur are invited so as to reach this office through the employer, if employed, not later than Oct. 21, 1992.

Applications received earlier in response to the advertisement appeared before will not be considered.

A. PROFESSOR

English	(Permanent)	1
Urdu	"	1
Hindi	"	1
Sociology	"	1
Sanskrit	"	1
Philosophy	"	1
Economics	"	1
Botany	"	2
Zoology	"	1
Chemistry	"	2
Computer Science	"	1
Maths(Temporary, Leave Vacancy)		1

B. READER

Political Science	(Permanent)	2
Hindi	"	1
Psychology	"	2
Psychology (Specialization in experimental Psychology)	"	1
Ancient History	"	1
Commerce	"	3
Economics	"	2
Education	"	2
Botany	"	2
Chemistry	"	2
Physics	"	2
Electronics	"	1
Maths	"	1
Maths (Temporary, Leave Vacancy)		1
Statistics	(Permanent)	1
Geography (Temporary, Leave Vacancy)		1

C. LECTURER

Geography	(Permanent)	1
English	"	1
English	(Temporary)	1
Sociology	(Permanent)	1
Electronics	"	2
Computer Science	"	1

Physics	Permanent	1
Zoology	"	1
Botany (Temporary, Leave Vacancy)		1
Mathematics (Temporary, Leave Vacancy)		1
Commerce	(Permanent)	1
Law	"	3
Law (Temporary, Leave Vacancy)		1
D. LIBRARIAN	Central Library	1

PAY SCALE

FOR PROFESSOR	:	4500-150-5700-200-7300
" READER	:	3700-125-4950-150-5700
" LECTURER	:	2200-75-2800-100-4000
" LIBRARIAN	:	3200-100-3500-125-4875

QUALIFICATIONS & REQUIREMENTS

FOR PROFESSORS

Either : Eminent scholar with published work of high quality and active engagement in research and ten years experience of teaching or research and experience of guiding research at doctorate level;

Or : Outstanding Scholar with established reputation for significant contribution to knowledge;

DESIRABLE (FOR PROFESSOR IN COMPUTER SCIENCE ONLY)

Experience on main frame computers, development of computer programming and Software development and/or teaching at University level.

FOR READERS : In the case of Faculty of Arts (except in department of Fine Arts & Music) and the Faculties of Commerce, Science and Education.

(i) Good academic record with a doctrorate of equivalent published work and active engagement in research or innovation in teaching methods or production of teaching material and;

(ii) Five years experience of teaching or Research including at least three years as Lecturer or in an equivalent position.

Provided that the requirements contained in sub-clause (ii) may be relaxed in the case of a candidate who, in the opinion of the Selection Committee, has outstanding research work to his credit.

FOR LECTURERS

(1) In the case of Faculty of Arts (Except the department of Fine Arts and Music) and the Faculties of Commerce and Science.

The minimum qualifications for the post of Lecturer in the University shall be Master's degree or an equivalent degree a foreign University in the relevant subject with at least 55% marks or its equivalent grade and consistently good academic record.

(2) In the case of Faculty of Law, the minimum qualification for the post of a Lecturer in the University shall be a degree of Master of Law or an equivalent degree of a foreign University with atleast 55% marks or its equivalent grade and consistently good academic record.

(3) In the case of post of Electronics, Master's degree will include M.Sc. Physics with Electronics, M.Sc. (Electronics), M.Tech (Electronics) or equivalent.

(4) For teaching post in Computer Science Master's degree will include M.Sc. (Computer Science), M.C.A, M.Tech. (Computers).

EXPLANATION

(a) A candidate (other than a candidate for Lecturership in the Faculty of Law) having obtained either 55% marks in Bachelor's degree examination and Second Class in Intermediate Examination, or 50% marks in each of the two examinations separately, is said to have consistently good academic record.

(b) A candidate for Lecturership in the Faculty of Law having obtained either 55% marks in LL.B degree examination and Second Class in any other Bachelor's degree examination or 50% marks in each of the two examinations separately is said to have consistently good academic record.

(c) For appointment to the post of Lecturer only those candidates shall be eligible who, besides fulfilling the minimum academic qualifications prescribed for the post of Lecturer have qualified in a comprehensive test, if any, conducted as per scheme of University Grants Commission provided that the following those candidates who are otherwise qualified shall be exempted from appearing in the comprehensive UGC test for recruitment of teacher's as under:-

(i) All candidates who have passed UGC/CSIR, JRF examination;

(ii) All candidates who have already been awarded Ph.D./M.Phil degree;

(iii) All candidates who will be awarded M.Phil upto December' 90 and Ph.D. upto December, 1992.

FOR LIBRARIAN

(a) First/Second Class B.A/B.Sc./B.Com. degree plus first or second class M.Lib. Sc. degree (Two Years Course)

OR

First/Second class M.A/M.Com./M.Sc. degree plus First or Second class B.Lib. Sc.

(b) Atleast ten years experience as Librarian or of working in a responsible professional capacity in a library.

(c) Recognised research experience or work on special projects.

OTHER CONDITIONS FOR PERMANENT POSTS ONLY

(1) The period of probation shall be one year at the first instance.

(2) The incumbent, shall get the benefit of general provident fund (G.P.F/Pension) as per rules.

(3) The age of superannuation shall be as per rules.

The candidates shall be required to appear for interview if called, at their own expense. The Selection Committee may recommend higher initial salary to a person specially qualified for the above posts. It will be open to the University not to fill up any post advertised.

Canvassing in any form by or on behalf of the candidate will disqualify him/her.

Ram Narain Singh
REGISTRAR

ANDHRA PRADESH AGRICULTURAL UNIVERSITY

Admn. Office: Rajendranagar: Hyderabad-500030

ADVERTISEMENT NO. 3/RC/92 Dt.21-9-1992

Applications in the prescribed form together with a Registration Fee of Rs. 10/- are invited for the undermentioned posts in A.P. Agricultural University, Rajendranagar so as to reach the Registrar, A.P. Agricultural University, Administrative Office, Rajendranagar, Hyderabad-500030 on or before 30-10-92 5.00 P.M.

1) Dean of Student Affairs: - 1
(Pay scale: Rs 4500-7300--UGC)

2) Transport Officer - 1
(Pay scale: Rs. 2410-90-2950-100-4050) withallowances as admis-sible as per University Rules.

Subject	Professor cadre	Assoc. Prof. cadre	Asst. Prof. cadre
	Rs.4500-7300	Rs.3700-5700	Rs.2200-4000)
3) FACULTY OF AGRICULTURE			
a) Agronomy	1	8	6
b) Genetics & Plant Breeding	-	8	3
c) Soil Science & Agril. Chemistry	3	4	1
d) Plant Physiology	-	1	3
e) Agrl. Engineering. (Senior Scientist)	1	1	2
f) Horticulture (Senior Scientist)	1	10	1
g) Bio-Chemistry (temporary but likely to continue)	1	-	1
h) Plant Pathology	-	3	1
i) Entomology	1	5	3
j) Ag. Extension	-	3	2
k) Ag. Economics	-	2	-
l) Senior Scientist (Oil Seeds)	1	-	-
m) Senior Scientist (Citrus Pathology)	1	-	-
n) Ornithologist	-	1	-
o) Mathematics & Statistics	-	1	1
p) English	-	-	1

RULE OF RESERVATION

Assoc. Professor cadre: SC-8, ST-3, BC'A'-3, BC'B'-6, BC'D'-4

Asst. Professor cadre: SC-4, ST-2, BC'A'-2, BC'B'-2, BC'C'-1, BC'D'-1

4) FACULTY OF VETERINARY SCIENCE

a) Dairy Technology	1	-	-
b) Dairy Engineering	-	-	2
c) Dairy Business Management	-	-	1
d) Dairy Science (Dairy Production)	-	-	5
e) Meat Science & Technology	1	-	-
f) Senior Scientist (Cattle Breeding Project)	1	-	-
g) Genetics & Animal Breeding	1	-	2
h) Fishery Science			
1) Aquaculture (at Kakinada) (at Palair)	1	1	3
2) Fish Processing Technology	-	1	1
3) Occeanography & Limnology	-	1	-
4) Fishery Engineering	-	1	-
5) Fishery Extension	-	-	1
6) Fishery Biology	-	-	1
i) Animal Nutrition	-	1	-
j) Pharmacology	-	1	1
k) Anatomy	-	-	1
l) Animal Nutrition/ Feed & Fodder Technology/Dairy Science/Genetics & Animal Breeding.	-	-	5
m) Pathology	-	-	1
n) Feed & Fodder Technology	-	-	2
o) Animal Reproduction & Gynaecology	-	-	5
p) Medicine	-	-	3
q) Parasitology	-	-	1
r) Poultry Science	-	-	1

RULE OF RESERVATION

Assoc. Professor: OC-4, SC-1, BC'B'-1

Asst. Professor: OC-21, SC-4, ST-3, BC'A'-3, BC'B'-3, BC'C'-1, BC'D'-1.

5) FACULTY OF HOME SCIENCE

a) Human Development & Family Studies	1	-	-
b) Family Resource Management	1	-	-
c) Textiles & Clothing	1	-	-

6) LIBRARY SERVICE

a) Assistant Librarians	-	-	5

RULE OF RESERVATION: OC-3, SC-1, BC'A'-1

7) PHYSICAL DIRECTORS: - - 4

RULE OF RESERVATION: SC-1, BC'A'-1, OC-2

NOTE: (a) In case sufficient candidates belonging to SC & ST communities are not available in one discipline, the same is likely to be made up in other disciplines to the extent of total number of vacancies available in those disciplines.

(b) The University reserves the right not to fill all or any of the vacancies notified.

Those who have already applied for the post of Professors in response to the Advt. Nos. 1/RC/90, dt. 11-5-90 and 2/RC/91, dt. 12-8-91 and also for the posts of Asst. Professor in response to the Advt. No. 2/RC/92, dt. 8-4-1992 NEED NOT APPLY AGAIN.

Prescribed application form together with full details of qualifications prescribed for the posts and other particulars can be had from the University on payment of Rs. 10/- in person or through a Crossed Demand Draft drawn from any Nationalised Bank in favour of Comptroller, A.P. Agricultural University, Rajendranagar, Hyderabad. NO MONEY ORDER/POSTAL ORDER will be entertained. For obtaining it by post, a self addressed and stamped envelope of size 35cm x 15cm affixing worth of Rs.6/- on it should be enclosed to the requisition letter. The cover containing the requisition for application form should be superscribed "Requisition for Application" and addressed to the Registrar, Administrative Office, A.P. Agricultural University, Rajendranagar, Hyderabad-500 030.

P. Bhaskara Prasad
REGISTRAR

INDIAN INSTITUTE OF TECHNOLOGY, BOMBAY

POWAI, BOMBAY 400 076

Advt. No.G-50/92-93

The Institute invites applications for admission to the Spring Semester for Doctoral Programmes and M.Tech. in Biomedical Engineering. Admission is open to all Engineering and Science Departments, Humanities and Social Sciences (H&SS) Department and various Interdisciplinary Programmes.

1. PH.D. PROGRAMME

1.1 Minimum Qualification: One of the following in appropriate area:

(i) M.Tech. or equivalent
(ii) B.Tech./M.Sc./M.A./M.B.B.S. or equivalent with at least 60% marks or equivalent.
(iii) M.A. in Arts subjects with 55% marks for admission to H&SS Department.
(iv) M.Phil.

Candidates whose results are awaited may also apply.

1.2 Facilities & Area of Research

All departments have well developed laboratories to facilitate research work in conventional as well as forefront areas. Additional facilities also exist in Advanced Centre for Research in Electronics (ACRE); Centre for Studies in Resources Engineering (CSRE), Centre for Environmental Science and Engineering (CESE), Regional Sophisticated Instrumentation Centre (RSIC) and Computer Aided Design Centre (CAD Centre).

Schools have been established in Cryogenics, Biomedical Engineering, Laser & Laser Systems and Offshore Engineering, New facilities have been created under Thrust Areas specifically in fields such as Microelectronics, Microprocessor Applications, Intelligent Systems, Robotics, Biotechnology, Telematics etc.

1.3 Scholarship: Candidates are eligible for scholarship as follows:

With M.Tech. degree - Rs.2400 p.m.
With B.Tech., M.Sc., M.A.,
M.Phil. or equivalent - Rs.1800 p.m.

2. M.TECH. IN BIOMEDICAL ENGINEERING

2.1 Minimum Qualification: B.Tech./M.Sc./M.B.B.S./ with at least 60% marks.

2.2 Scholarship Rs.1800/- p.m.

3. SPONSORED CANDIDATES: The Institute welcomes application from candidates from well established R & D Laboratories for both the programmes. Such candidates are not eligible for scholarship. The candidates should have at least 2 years experience or a valid GATE score and 60% marks in qualifying examination.

4. GENERAL INFORMATION

Candidates with B.Tech./M.Sc./M.A./M.B.B.S./M.Phil. should have valid GATE, UGC, CSIR or BIOMEET score to be eligible for scholarship vacancies. Seats are reserved for the SC/ST candidates as per rules.

5. APPLICATION & BROCHURE: This can be supplied against payment of Rs.50/- by Demand Draft in favour of IIT Bombay enclosing self addressed stamped (Postage Rs.3/-) envelope of size 27cm x 12cm. superscribed "Application Form for Ph.D./M.Tech." or can be collected against the draft during working hours from the Academic Office.

6. DATES

Last date for issue of forms and receipt of completed form: **11th November, 1992**
Likely date for interview/test: **2nd & 3rd December, 1992.**

Deputy Registrar (Academic)

Australian Maritime College

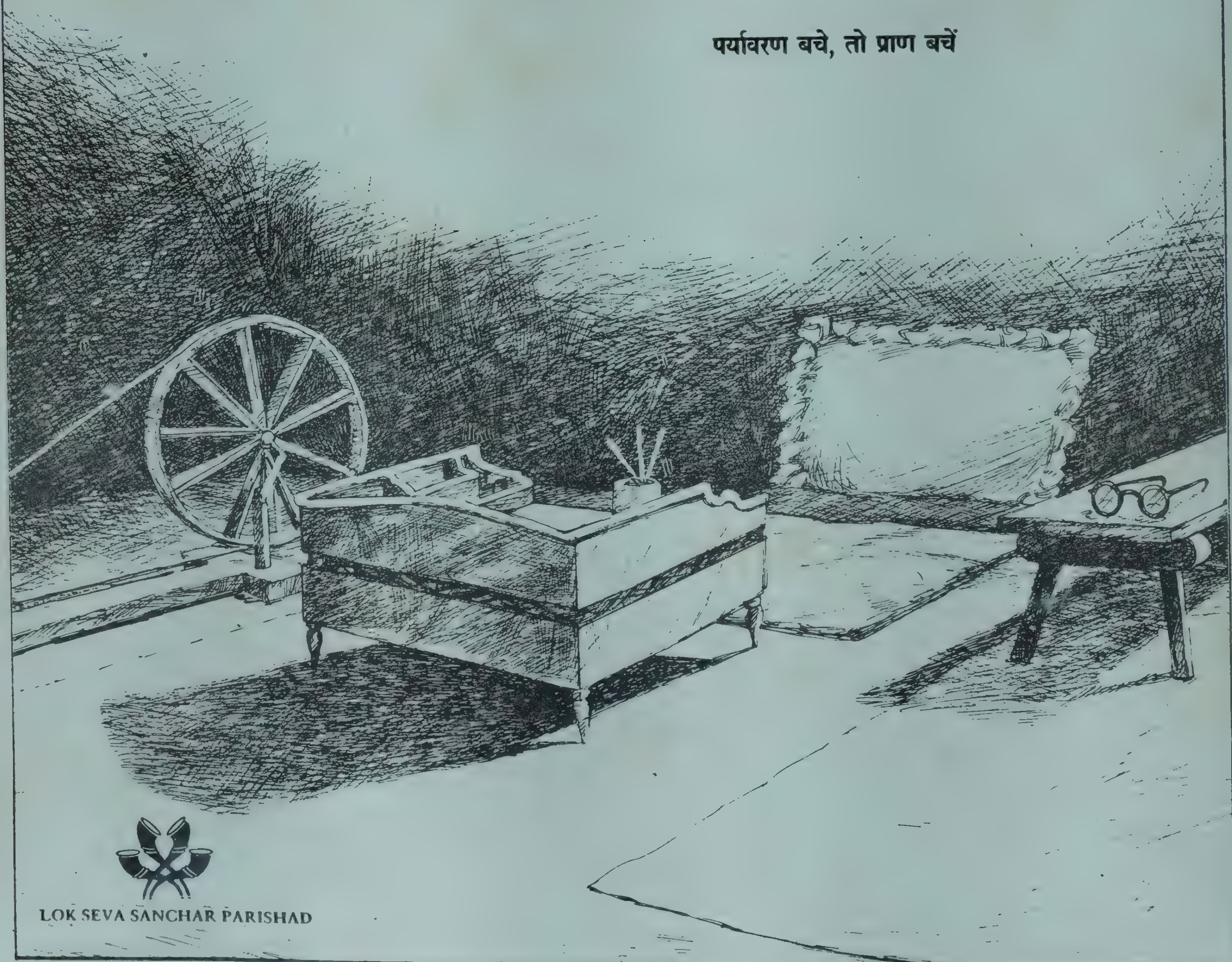
Indian maritime student Prit Mann from Punjab being congratulated by Secretary General of the International Maritime Organization, Mr William O'Neil, on having completed his Diploma requirements.

"The earth provides enough to satisfy every man's needs, but not for anybody's greed."

Gandhiji

Let us, today, remember these words of the Mahatma and resolve to simplify our needs. The environment should serve our need, not our greed

पर्यावरण बचे, तो प्राण बचें



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University News

MONDAY, OCTOBER 12, 1992

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Dr. A. Sukumaran Nair, Vice-Chancellor, Mahatma Gandhi University, lighting the lamp to mark the inauguration of the National Workshop on Management of Physical Education and Sports in Universities and Colleges.

MAHATMA GANDHI UNIVERSITY
MANAGEMENT OF
AND SPORTS IN
CO GE
5-18

Shri E.T. Muhammed Basheer, Kerala Education Minister, presenting the Dr. B.L. Gupta Inter-University General Championship Trophy to Prof. S. Rajagopalan, Pro-Vice-Chancellor, Kerala University.

UNIVERSITY OF DELHI

Advt. Estab. IV/Advt. 134/92 **Dated; October 4, 1992.**

Applications on the prescribed forms are invited for the following posts in various Departments/Centres of the University, so as to reach the REGISTRAR, UNIVERSITY OF DELHI, DELHI-110 007 Latest by November 3, 1992.

S. No. Department/Centre & Posts

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1. **BOTANY** *Research Associates (3)* Specialization: Taxonomy/Ecology/ Biology of Reproduction/Mycology and Plant Pathology/Gymnosperms and Pteridophytes.
2. **BUDDHIST STUDIES** *Research Associates (2)* (DSA) Specialization: One for Japanese Scholar and the other should have specialization in History of Buddhism, Art, Architecture and Culture Arts.
3. **SOCIOLOGY** *Lecturers* (3)*
4. **PERSIAN** *Professor (1)*
5. **PHILOSOPHY** *Professor (1), Lecturer** (1)*
6. **POLITICAL SCIENCE** *Professor (1)* Specialization: Political Theory/Indian Political thought.
7. **COMPUTER SCIENCE** *Professor (1)* Specialization: Theoritical Computer Science, Operating Systems, Computer Network, Fifth generation Systems Parallel Computations, Expert Systems, Distributed data processing.
8. **ADULT CONTINUING EDUCATION & EXTENSION** *Readers/Asstt. Directors (3), Lecturers/Project Officers (4)* Special/Desirable qualifications (Lecturer/Project Officer):
   i) Ph.D./M.Phil in Adult continuing Education/Non-Formal Education/ Population Education/Demography/ Extension Education from an Indian University or an equivalent degree from a Foreign University.
   ii) Three years experience in project management in Adult and Continuing Education/Non-Formal Education/Extension Education/ Population Education/Demography.
9. i) **CAMPUS LAW CENTRE** *Professor (1)*
   ii) **LAW CENTRE-1** *Professor (1)*
10. a) **EDUCATION** *Professor (1), Reader (1), Lecturer (1)* Specialization (Reader): Educational Psychology with Psychometry
    b) **Maulana Azad Centre for Elementary & Social Education (MACESE)** *Professor @ (1), Reader@ (1), Research Associate @ (1)* Specialization (Professor/Reader/ Research Associate): Preference will be given to candidates having experience in Teacher Education (Including Extension work in Education) or Curriculum Development in the Area of Elementary Education or Organisation of Community Services or research related to Elementary Education.
    c) **Institute of Advanced Studies in Education (IASE)** *Professor @ (1)* Special/Desirable qualifications: Preference will be given to candidates having ten years' teaching experience in Teacher-Training College/ Department of Education (Including five years' teaching experience at post-graduate level/in organisation and promotion of in-service programme for secondary school teachers).
11. **AFRICAN STUDIES** *Reader (1)* Geography Special/Desirable qualifications:
    i) Doctorate Degree or published work on Africa.
    ii) Field work in Africa or visiting assignment at an African University.
    iii) Knowledge of an African language.
12. **GERMANIC & ROMANCE STUDIES** *Reader (1)* German Specialization: German Literature.
13. i) **CAMPUS LAW CENTRE** *Professor (1), Research Associates (2)* Specialization (Professor): Science, Technology & Environment or in Law & Development.
    ii) **LAW CENTRE-1** *Professor (1)* Specialization: International Business law including Taxation.

POPULATION EDUCATION RESOURCE CENTRE
(Adult Continuing Education & Extension)
Reader/Asstt. Director @@(1), Lecturer/Project Officer @@ (1)
Special/Desirable qualifications (Lecturer/Project Officer): Same as in Serial No. 8.

★ Two permanent vacancies and one leave vacancy
★★ Leave vacncy
@ Temporary upto 31.3.1993.
@@ Temporary upto 31.3.1995.

Note i): Lecturer: In each subject one out of five posts (at least one) is meant for candidates belonging to SC/ST. If no suitable candidate is available, the post will be filled up by any other suitable candidate.

ii) Professor/Reader: Other things being equal preference will be given to SC/ST candidate.

iii) It will be open to the University to consider names of suitable candidates who may not have applied.

iv) For posts S. No. 11 to 13 candidates who had applied earlier in response to our advertisement no. Estab. IV/Advt. 129 dated 30.4.91 need not apply again.

v) Number of posts is given within parenthesis against each post.

vi) Scales of Pay (Rs):
Professor: 4500-150-5700-200-7300
Reader/Asstt. Director: 3700-125-4950-150-5700
Lecturer/Project Officer: 2200-75-2800-100-4000.

Research Associate: 2200-100-2700; 2700-100-3200; 3200-100-3700; 3700-125-4325 (Depending upon the recommendations of the Selection Committee).

Research Associate (MACESE): Consolidated Salary of Rs. 4500/-p.m.

All the above posts, other than those of the Research Associates, carry DA, CCA, HRA etc. as are admissible under the rules inforce in the University from time to time.

The details regarding prescribed qualifications and application forms, for various posts, can be had from **Establishment Section-IV (Room No. 205). New Administrative Block, University of Delhi, Delhi-110007** during working hours (09.30 A.M. to 12.30 and 2.00 p.m. to 5.00 p.m.) either personally or by sending a self addressed and postage stamped envelope at the above address.

PROF. S.K. WASAN
(REGISTRAR)

DELHI-110 007;
October 4, 1992.

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Editor :
SUTINDER SINGH

C.F.T.R.I., MYSORE

Is Education a Democratic Disaster?

R.S. Trivedi*

"Hot lunches succeed in keeping Children in School; mere relevant curricula do not".

If it is said that man is formed by circumstances then it is only in society that he develops his real nature. The strength of his nature is measured in the context of the society in which he is growing. It is fundamentally, here, that one's logic realistically fails and one indulges in manipulating illusions.

Ever since independence, in the midst of post-independence cultural contradictions, the leaders in almost all spheres of social work have been nurturing the illusions.

India constitutionally has been declared a Republic. Consequently people achieved political democracy, constitutional citizenship and without hesitation one could say, ethical equality.

Political leaders in India have been endeavouring to achieve the constitutional ideas but the more they endeavour, the more these ideas have remained at the slogan-level. Democracy is yet to percolate to the social functioning; equality is still a distant dream in a caste and class stratified society. Education in this context, as a social institution, is yet to be evolved. Education has remained evocative, symbolic and prestigeous. In a social hierarchy which is chiefly based in caste system and further supported by cleavages in earning levels and wage structures, education has remained an instrument not of change but an instrument to select manpower to suit the middle and upper class culture.

The system does not function in a vacuum, but it is linked with the political, social and economic order. It's a reflection of the mixed milieu. The system has glaringly shown some of the contradictions and is severely afflicting the inarticulate and subdued sections of the society.

Whatever little progress is made, its major benefits have gone to the landed gentry, professionals, bureaucrats, business community and politicians. This vested group, known as elites, refuses to share power and opportunities with the less privileged members of the society.

The socio-economic and political profile of the academic system does not lend itself to the development of values of life. Equal opportunity for all has thus remained at more theoretical level. The greatest tragedy in education is treating unequals as equals. How true is Helvitius when he says, "Morality is only a frivolous science if it is not combined with politics and legislation". In fact, all moral questions whether pertaining to crime, punishment, delinquency, unemployment, poverty or education, involve the entire social system and its pattern of interaction. Ethics, in this context, is a social phenomenon.

Unfortunately, education that continues to expand as a mere linear expansion even after independence, has not developed into an expression of a collective life. It served and has been still serving as a privilege of the elite and thus contributes to isolate common man from the educational orbit and the educated from the community life.

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* *Chairman, Higher Secondary Education Board, Gujarat State, Ahmedabad and former Vice-Chancellor, Bhavnagar University.*

The post-independence contradictions are democracy and authoritarian charisma, elitism and egalitarianism, asceticism and consumerism, entrepreneurial spirit of the upper class culture and uninnovative ethos for those who are struggling to get bare square meals. Strictly hierarchical in nature, the system synchronised with caste and stratified social system and thus education has become an instrumental component of caste and class domination. Education in this milieu has served as a mechanism of occupational placement, the mechanism that the employers use to select persons who have been socialized into dominant status culture. Unequal education has its roots in the very class structure which it serves to legitimize and reproduce. Inequalities in education are thus seen as part of the web of class stratified society and are likely to persist. Social relations of the school replicate the social relations of the work culture in the productive area in particular and area of interaction in the social milieu in general. This trains the young to adapt to the socially accepted division of work.

The new policy of education to be framed throws feelers as to how education could serve as an instrument of change for the transformation of social and political institutions. Such a transformation would certainly pave the way for modernization. The common man in the educational process is still absent. Modernization process through education has to involve the common man. The toiling worker has found the formal system of education as a leisure-time activity. Work and education are divorced. Education to day substitutes work and has become a synonym to non-work.

People exerting to earn their bread cannot afford to entertain such a divorce of work and learning. Education today is meant for middle class and upper class. The concept of even vocational education is in tune with the upper class norms. The 'drop out' mentality for vocational education is dominant. Pupils joining such a programme of instruction are considered to be mere subsidiaries of industry. The academic system of formal education is hostile to any productive work. Present schools are primarily responsible for a flight from the work culture. Vocational education needs to be altered by massive changes in the entire educational system.

What role education is expected to play in the context of tribals and those who are socially, economically and geographically cut off from the main stream of modernization. How can such people be helped to identify themselves with the nation? Can education play the role to make the immobile population of the remote rural and forest areas, mobile?

What is the prowess of education if education cannot answer these questions? The politicization of the people as an Indian citizen and socialization of individuals to be a member of the one single national community overcoming the barriers of castes, religion, ethnic, linguistic and socio-economic disparities, should be the central programme of national education. The developmental perspective of the entire nation rests with the uplift of the oppressed.

The caste ridden hierarchical psyche now supported by the bureaucratic administrative machinery has not enabled educational system to cross the cultural barriers. Social psyche of the privileged few is linked with the traditional beliefs inherent in the peculiar cultures, belief-systems and symbolic rituals. The traditional elite, which is the product of the present educational system, continues the historical and social cleavage. This process has resulted into values that belong to the past and has repeated as the goals to be achieved. This process of education is labelled as a process of socialization which, in fact, is a conditioning process to imbibe the ideals and practices of the dominant culture in the community. Max Weber supports this state of affairs when he states that educational ideals and practices of a particular society should be viewed in terms of its "structure of domination". When a new policy of education is on the anvil a new "pedagogy of the oppressed" has to be evolved and implemented.

The present system of education is heavily susbsidised by the state governments and still the private rate of return are more than the social rate of return. We are promoting an outdated social order. 20% of the urban population still enjoys the 80% of the social benefits. About 13,000 doctors are produced every year and these doctors are available to 20% of the population only. The middle and upper class are the main beneficiaries of the system. 80% of the health budget is spent on 20% of the urban population. Like education, we continue to play a sort of medical fraud on the poor by denying them even the basic medical aid.

Educational system is still playing an integral part in the reorganisation of social hierarchies. Further, it points towards the development and maintenance of a distinctively "peasant mentality", as an ideal.

Political leadership has now to play a dynamic role to see that education plays its role not of maintenance pattern but of transformation. Children in remote villages, children of the S.C.and S.T. classes are still out of educational experiment either in the formal or non-formal system of education.

The project to study the educational status of the S.C., S.T. pupils on the national level was undertaken long back by the NCERT and the information was based on the 1971 census data. The project investigators also developed a formula to measure the co-efficient of equality. If the co-efficient of equality is less than the score of 100, then the S.C., S.T. students are not on the map in terms of equality with other communities. It was reported in this investigation that as one moves upwards, that is from primary to higher education, one finds a sharp decline in the co-efficient of equality. It reveals the educational disparities becoming acute (*NCERT Report*, 1978).

The state of affairs today is no better because education has not been rescued from the democratic disaster.

How long will it take to convince our political leaders that the nation will have to pay a heavy price if the masters remain ignorant?

The only hope for the nation to survive is the popular enlightenment through education. Is it possible if equal opportunity of education is denied to the people? Is it possible if imbalanced infrastructure in the name of educational facilities is maintained? Are we satisfied if the invisible plutocracy unrecognized and unidentified continues to rule over the people?

Universalization of primary education remains a slogan if education for the poor continued to be an obstacle race. Elitist curriculum is a brand of chloroform that is devised to give so called equal treatment to unequals. We are putting out incipient democracy to death without blood-letting or commotion.

Therefore, the existing traditional system which means book learning, which is a synonym to non work, has to be replaced. Education has to be development and production oriented for all. Those who can afford not to work only are entitled for sophisticated system of education is a concept that cannot be accepted not only by government committed to an socialistic pattern of society but even by a Republic that is heading towards a second industrial revolution. Education for self-reliance, the unknown concept in today's educational system has to be made more functional. This system only can bring cultural transformation instead of cultural expansion.

The new system of education has to recoganize its schedule of work eradicating material differences within the country in order to avoid new individual privileges perpetuating and reinforcing the inequality. Educational Planning is to be geared to the needs of political responsibility and desired productivity.

The overhauling of the system, therefore, requires dismantling of mechanism of bureaucratic control over the process, programme and method of education.

We are struggling the seek a new identity.

The present educational system is on trial and political leadership has to answer whether the system adopted has proved an elitist triumph or democratic disaster.

WITH COURAGE AND FAITH

ANNAMALAI UNIVERSITY

Notification

60th Annual Convocation - 1992

The 60th Annual Convocation for conferring Degrees, Titles and Diplomas will be held at Annamalainagar during the month of December 1992.

Filled in applications from the candidates for taking Degrees, Titles and Diplomas either *in person* or *in absentia* must reach the REGISTRAR, ANNAMALAI UNIVERSITY, ANNAMALAINAGAR 608002 on or before 31st October 1992. Printed form of applications can be obtained by sending a self addressed envelope affixing stamp to the value of Rs. 2/-

Those who have won Prize/Medal, those who have qualified for Research Degrees including M.Phil and those who have qualified for P.G. Courses, except Post B.Sc Diploma, Post M.Sc diploma & P.G. Diploma (B.E. B.Sc (Agri) B.D.S. & B.Pharm etc) in FIRST CLASS WITH DISTINCTION or FIRST CLASS may only apply "IN PERSON". All other candidates should take their degrees "IN ABSENTIA" only.

DISTANCE EDUCATION GRADUATES : Those who have not already submitted their applications for the degree/diploma (In Absentia) may submit the same on or before 31st October 1992. Separate application form will be issued for Distance Education Graduates.

Annamalainagar
September 1992

DR. PR. KARPAGAGANAPATHY
REGISTRAR

Perceived Work Environment of Women Principals

Jaya Indiresan*

Introduction

More and more women are aspiring, preparing and entering administrative and managerial positions the world over. Their number is increasing and the fields in which they are making their entry is also enlarging. This trend has led to an increasing number of research studies on various aspects of perceptions, attitudes, styles of functioning, career path of women in management both the India and outside the country. A review of some of the recent studies in India (Bhatnagar, D. and Nair, V. 1988, Gulhati, K. 1990, Vaz I.T 1988, Parikh I.J.1990., Joshi R.J., 1990) shows that while women in various sectors like IAS, Banking, Public and Private sectors in manufacturing and services have been included in these studies, hardly any research has been reported on women administrators in education sector, especially higher education. With the growing number of colleges and universities exclusively for women, (there are about 800 colleges and 5 universities exclusively for women) there are a larger number of women heading these institutions. As part of a larger study (Indiresan J. 1992) data were obtained on the perceived work environment of women principals. In this paper, an attempt has been made to analyse these perceptions and discuss their implications.

Importance of the Perception of Work Environment

Issues and challenges in the work situation have an important bearing on the functioning of administrators. Though the job of principal of a college is more or less the same, the personal perception of the individual could vary considerably. These perceptions are the products of the different type of experiences to which principals have been subjected. Further, the same experiences are interpreted differently by different persons. Taking the phenomenological approach of Carl Rogers, the subjective perception of the objective situation does have a bearing on the behaviours of individuals. Though it is difficult to clearly distinguish between the subjective perceptions and the objective reality, perceptions do have an important bearing on the functioning of the individual. If a large number of persons perceive the same way, it comes closer to reality. At the same time, even if a small number of persons perceive in a particular way, it has implications as far as these persons are concerned. Thus, an analysis of the perceptions would be very valuable in understanding the functioning of these principals.

The Data

As part of a larger study on the identification of training needs of Principals of women's colleges, a structured questionnaire with some open ended questions was sent to principals of 300 women's colleges situated all over the country. Usable responses were received from 122 respondents of which 100 were women heading women's colleges and 22 were men heading women's colleges. The Principals were requested to indicate the problems faced by them in their role as administrators of women's colleges. To examine whether the principals faced any specific problems due to their gender, the women principals were requested to identify the problems they faced as women in carrying out their jobs. These again are the subjective perceptions of the principals and as already indicated, they do influence the functioning of the women principals. As such, it is imperative that these problems are analysed and understood to appreciate the context in which these principals function.

Issues and Problems as Women Administrators

A large number of issues and problems were reported by the principals. A content analysis of these problems and issues yielded certain categories under which these problems could be classified. It was interesting to note that both men and women principals as general administrators reported similar problems. At the same time, women principals did bring out a large number of problems and issues which they perceived to be due to their gender. This paper is restricted to the discussion of the specific gender related problems and issues brought out by women principals.

It is interesting to note that to the question of identifying specific problems faced as women in carrying out their jobs, out of the 100 women respondents, 10 women principals reported that they had no special problems because they were women. Some examples :

- I enjoy my work. I feel confident in handling even odd situations. I feel women are no way weaker than men.
- No special problems as women administrator except that it is difficult to spare time required to pursue things at personal level which could be done in normal routine in offices. Being women administrator it is difficult to spare time for personal visits to establish links of the institutions, though in personally pursuing things, I have experienced that ladies are given respect and work is done.
- No problem in managing college as well as home during busy schedules in the college.

** Senior Fellow, Higher Education Unit, National Institute of Educational Planning and Administration (NIEPA), New Delhi- 110016.*

An administrator is an administrator whether it is a man or a woman. The problems faced by any administrator are identical, such as political and elitist pressure during student admissions. To cope with such pressure is a bit tiring for a woman administrator. Society may view a women administrator and man administrator differently. But as a women administrator, I do not feel different from male counterpart. Individual capacity determines a good administrator and not man or a woman.

- I do not feel personally any problem at all but sometimes other people want to take advantage and try to exploit it especially in backward areas.
- I have not faced any internal administrative problems as my staff and students have been cooperating with me nicely.

These are some illustrations of principals who have experienced no specific problem as women administrators. On the other hand, large number of principals have listed a variety of problems faced by them as women administrators. A content analysis of these problems showed that they could be broadly classified under five categories. They are

(1) Work relate problems

(2) Value related problems

(3) Gender related problems

(4) Social related problems

(5) Self related problems

These problems are discussed here.

Work Related Problems

A number of work related problems centre around the mobility as women. They have reported that they find it difficult to run around for personal visits for pursuing files, especially for finance. Lack of transport and mobility in backward areas has been reported as a hindrance. As one principal has elaborated, this lack of mobility leads to :

- Infrequent exchange of views with their colleagues. Poor accessibility to information about real life situations crop up in administration. The above mentioned problems are faced by women administrators for which they themselves are half the time responsible because most of the time they have a tendency to stick to the desk and not move around. The inability to move around is again brought about by pressure in society and responsibilities of home management and child rearing.
- As the area is backward, people of this town do not like the mobility of women in various fields and sometimes efficiency of women administrator suffers.
- Less mobility : consequently lesser interchange of ideas.
- As a woman I am not mobile enough to go to different places for college work.
- It becomes difficult on my part to contact the officers concerned at a particular time and situation.
- Being a woman I have to depend on my male staff members for work outside the college. Therefore, I find it difficult to be strict with them at times.

Another set of work related problems is managing personnel, both men and women. It has been reported that some women teachers are unwilling to involve themselves in extra work, they lack responsibility, are easy going and have less devotion to work. Non serious attitude of women who come due to recommendation and the inability either to get rid of them or discipline them leads to various problems. At the same time as a woman administrator, one is expected to be sympathetic to women teachers.

The principals have also reported problems of dealing with male staff. It is reported that they have to depend on male staff for outside work and this leads to discipline problems. The male clerical staff dominate due to female weakness. Some have reported non-cooperation of men staff. There is also a feeling that there is dissent on the part of men to follow or take instructions from a woman administrator.

- Male chauvinism in some male staff.
- Commanding tone of voice and manner.

Other work related problem is the feeling that they are not getting proper representation in academic bodies at the university and state level. Some have expressed that there is partiality and bias keeping the women out.

Some principals have reported that they find the working conditions non-congenial. Some examples are :

- Sometimes people think they can get anything done from women administrators. Expect to go against rules and regulations.
- To be a subordinate and obey women administrators hurts the ego of some men. Hence they become somewhat hard to tackle and disrupt smooth working of the institution.
- Women workers always expect sympathetic attitude from women administrators which at times causes inactivity.

Value Related Problems

It is significant to note that many principals have raised very serious problems pertaining to certain values and ethics. One of the problems which has been brought out by a number of women principals is the existence of corruption both at the management and other government levels and how this is leading to value conflicts. Non compliance to be a party to the curruption lead to harassment, non-cooperation and some principals have even reported attempts at character assassination with anonymous letters. Absence of proper interpretation of values and lack of moral value education is seen as a crisis in value management.

- As a woman administrator vis-a-vis male dominated management there are a large number of problems. Even the honour of women administrators is at stake sometimes as the women administrators are not able to agree to misuse of funds and authority, thereby creating friction. Women administrators sometimes cannot socialize with the male management causing conflict of ego and creating problems.

- We see so much corruption but we cannot fight it very strongly because we are supposed to be gentle and soft spoken.

Gender Related Problems

Some principals have reported certain problems which they perceive to be due to their gender. These issues pertain to their feelings of not being respected, marginalised, not being taken seriously, overlooked etc. Some examples are :

- People do not take me seriously. Even the uneducated private management considers me to be only a woman, though I am more educated and capable of doing my work. They sometimes become dominating and insulting.
- Improper appreciation of women's problems by administrators, especially male administrators.
- The government authorities and university authorities do not listen or take our suggestions because we are women.
- In the university set up as in other places too, women are given back seats.
- Feel I am being harassed in administration by college management and the government bodies. (education department and the university).
- I feel that I am overlooked for a higher post as I am a woman.
- Proper representation not given to women on academic, administrative and controlling bodies both at the state and university level.
- I feel difficulty in going to the university and talking to clerks. The clerks do not try to understand my problem due to my female weakness and try to dominate over me.

Social Related Problems

Certain problems related to the social environment have been reported. These pertain to certain social stereotypes and norms expected from women. Some examples :

- Apathetic attitude towards the problems arising out of environmental and social situation.
- To move here and there, to talk with others frankly and freely is not socially permissible.
- Since I belong to a minority institution, which is being run in a backward area, the religious and social dogmas are always an obstacle to any advance step taken.

Self Related Problems

Some principals have reported problems they face as working women. These generally relate to their dilemma in balancing their attention between the family and work. The dual responsibility puts a lot of stress on the principals. Some examples are :

- I feel over burdened with duties of office, home and children.
- Less time to spend with my husband and children.
- Less time to read, write and enjoy other types of recreation.
- Managing college as well as home during busy schedules in the college.
- Being a women, I can't give more time to the college as men. I have to to look after my home; for a lady administrator responsibility, problems and work both inside and outside home will be more than a man.
- I have to look towards my family affairs as well as to the institution where I am working. Sometimes I am bound to neglect my family or my duty for the institution which I don't like in my inner heart to do.

Implications

In recent years studies on gender discrimination have been receiving lot of attention. The objective of this study was to analyse and understand the special problems, if any, faced by principals of women's colleges. This study has revealed that while some women have declared that they face no special problems because they are women, a large majority of women principals have brought out a variety of problems faced by them as women administrators. It must be pointed out here that similar problems may be faced by men administrators also. However, the fact that the women principals have perceived these to be of relevance to them because of their gender has a salience in terms of their performance.

Women administrators can be helped to cope with these problems by sensitising them to these issues in specially designed orientation programmes. Here they can be provided opportunities to share their experiences with others and exchange views on how the problem has been handled successfully. Networking of women principals can be another useful strategy. Confidence building exercises for enhancing their self-image would also facilitate in coping with their functions more effectively.

References

1. Bhatnagar, D. and Nair, V., Women Managers Speak Up: A study of the concerns and expectations of Women Managers, **Indian Management**, 1988, 27, 4, 25-36.

2. Gulhati, K. Attitudes toward Women Managers : Comparison of Attitudes of Male and Female Managers in India, **Economic and Political Weekly**, February 17-24, 1990.

3. Indiresan, J. **Identification of Training Needs of Principals of Women's Colleges**, NIEPA, New Delhi, 1991.

4. Joshi, R.J. Women in Management : Perceptions and Attitudes of Mangers. **Indian Journal of Industrial Relations**, 26, 2, 1990, 175-182.

5. Parikh, I.J. **Career path of Women in Management in India**, Working Paper 884, 11M, Ahmedabad, 1990.

6. Vaz, I.T., Women Managers in Banking Sector, **Indian Management** 1988, 27, 4, 14-18.

Status of Researches in Higher Education

A Response to C.L. Anand and Piloo Buch

Ganesh Chitra Naik*

Included in *Fourth Survey of Research in Education* (Buch 1991), is a separate section, for the first time, devoted to "Research in Higher Education" which is contributed by C.L. Anand and Piloo Buch. After doing a thorough analysis of 222 studies done so far since 1943, Anand and Buch have given an evaluative statement on the status of researches (which is likely to be quoted in further research in higher education) stating –

> "The 200 and odd studies reviewed here are theoretical and yet not helpful to build any theory in higher education. They are therefore, irrelevant and do not in any meaningful way, meet the research needs of the higher education". (p. 1350).

This is really a comment for serious consideration not only because it relates to the relevance of researches conducted in higher education so far, but it has been given by two eminent personalities in the field of education in general and higher education in particular as they are supposed to have gone through all the studies in higher education.

When logically analysed, the evaluative comment could be seen in three important parts as follows :

Part-I The 200 and odd studies reviewed are theoretical.

Part-II and yet not helpful to build any theory in higher education.

Part-III Therefore, these studies are irrelevant and do not in any meaningful way meet the research needs of higher education.

The concluding statement (Part III) is valid only when the premises (Part I & II) are true. The part I states that *all* studies reviewed are theoretical, which is hardly true. There are many studies covered in the *Fourth Survey of Research in Education* which are not necessrily theoretical (For example, Banerji and Pylee 1984, Benal 1987, Mishra 1987, Patankar 1984). Rather it is true that most of the studies are theoretical. Likewise the part II i.e. "Yet not helpful to build any theory in higher education" is exaggerated one. If part II is true, it can be assumed that the studies which are theoretical are either *not* theoretical in reality or *do not* have a theoretical framework. But, theoretical studies are there. Therefore, the only possibility could be that the theoretical studies lack theoretical framework. But are the 222 research abstracts sufficient to support this assumption? An abstract consists of title of the study, objectives/hypotheses, methodology and findings – all in as brief as possible. These four aspects are no doubt essential but not sufficient to give an evaluative comment on the quality of a research. The theoretical framework on which the research problem is based and the discussion of results which integrates the earlier theories and the research findings are the most needed aspects of research report. The abstracts in the Survey unfortunately lack these two important aspects for which it is difficult to judge and appreciate the quality of researches. It is unlikely that Anand and Buch have gone through all the original research reports. What they might have done is a mere analysis of abstracts of researches. On the basis of this limited and insufficient information it cannot be said that the researches do not have their theoretical support (framework).

Now, it can be seen whether these theoretical studies can contribute to theory building in higher education. According to Anand and Buch, these studies are *not helpful* to build *any* theory in higher education. Here, the word helpful carries an emotional meaning (an unfavourable attitude) rather than a factual meaning. The fact is that the studies already done in that area are not sufficient to build any theory in higher education. If one fails to build any theory in higher education on the basis of the 222 studies, it does not necessarily imply that the studies are useless (not helpful). It is more appropriate to say that these studies are not sufficient to arrive at any theory.

So the first two parts of the evaluative statement could be modified as "Most of the 200 and odd studies reviewed are theoretical and yet not sufficient to build any theory in higher education".

On the basis of these facts, it cannot be concluded that "all these studies are irrelevant". It may be a fact that the present state of affairs in the field of research in higher education is not upto satisfaction. But this does not imply that all the studies relating to higher education are irrelevant, and do not in any way meet the research needs of the higher education. This concluding statement of Anand & Buch is out of emotions rather than facts, crooked thinking rather than sound logic.

References

Anand, C.L. and Buch, Piloo, "Research in Higher Education – A Trend Report", In Buch, M.B. (ed) **Fourth Survey of Research in Education**, New Delhi: N.C.E.R.T., 1991.

Benal, B.I., **A Critical Study of Development of Higher Education in the State of Karnataka during Six Five Year Plans (1950-1985) with special reference to Karnataka University**, Ph.D. Edu. 1987.

Banerji, A and Pylee, M.V., **Teachers in Higher Education – Grievances and their Redressal**, NIEPA, 1984.

Mishra, A.N., **A Study of the Hostel Life of University students of Haryana**, Ph.D. Edu., 1987.

Patankar, S.D., **A Study of Instruction at the Postgraduate Level in the M.S. University of Baroda**, Ph. D. Edu., 1984.

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LIBRARIAN EXTRAORDINARY
Dr. S.R. Ranganathan

M. S. Rana*

Some are born great and some others acquire greatness by their path-breaking achievements. Shiyali Ramamrita Ranganathan (1892 – 1972) falls in the latter category of the greats. He rose to the highest pinnacle of scholastic fame by virtue of his single-minded devotion to the profession of librarianship. He was endowed with a multi-faceted personality – a committed teacher, an erudite scholar, a pragmatic thinker, an innovative researcher, a prolific writer, an affable colleague, an orator of hypnotic order, a leader of men and above all a librarian extraordinary. Where shall we find a Librarian to match his virtues of head and heart? I emphatically would say NO WHERE ! NO WHERE!!

Ranganathan was a highly acknowledged teacher of mathematics of his time. Before venturing into the field of library science he had made notable contributions in the field of mathematics. He had presented learned papers at the age of 25 at the national level conferences of the Indian Mathematical Society and the Indian Science Congress. His papers on "Indian Mathematics", "Convergent Sequence", "Bernoulli's Polynomials" and "Herpolhode Theorem" were highly appreciated and commended by mathematicians of those days. His professors and colleagues thought that one day he would make a mark in the subject. Luck had it otherwise. He did make a mark but in the field of library science. "Thus India lost one of the most enthusiastic mathematics teachers, and Librarianship acquired a man whose mental approach was of a strictly scientific and mathematically exact nature."

He drifted into the world of librarianship by a quirk of fate. He was one of the nine hundred applicants for the post of Librarian at the University of Madras. He was offered this position which he accepted at the behest of his friends. A man who had made a mark in teaching mathematics did not find initially anything engaging in librarianship. He was not an ordinary soul who would be satisfied just by attending to routine work. His inner self revolted against it. He said to himself, "I felt shocked by the absence of anything worthwhile to do in the Library [and was] almost tempted to go back to my teaching work." His mentor principal H. S. Duncan counselled him, "You have not seen much of Librarianship yet, you may find something in it after you had studied the subject in London". His words proved prophetic. A graduate with honours in Librarianship from the University of London, Ranganathan returned home in 1925 "full of enthusiasm and new ideas with the mission of introducing reforms and bringing about improvement in his own Library at the University of Madras." His philosophy of librarianship was nurtured in British libraries. He closely watched their practices and procedures and their place in educational system. He was very much influenced by Professor W. C. Berwick Sayers his teacher and Librarian of the famous Croydon Public Library.

His "Madras experiment" with books between the years 1924-1944 endowed him with the practical wisdom of the highest order. This period has been functionally divided into four facets by one of his most favoured category student – Professor P. N. Kaula. The years 1925-1928 are called "Demonstration Triennium", 1929-1934 are called "Development Sexennium"; 1934-1937 are called "Fulfilment Triennium" and 1937-1940 the "Twilight Triennium." During these periods he reorganised the library, new systems of classification and cataloguing and reference service were introduced, home delivery of book service, open access system, and inter-library loan facility were started. The working hours of the library were extended to 13 hours a day on all days of the year. Designing of library building, equipments, fittings and furniture, and library stationery were undertaken. "He used mass media and personal acquaintance to make the library hum with activity, and the University Library soon acquired a niche, in the world of the enlightened public of Madras".

His 20 years at Madras proved to be the most fertile and formative years of librarianship in India. He worked thirteen hours a day round the week. He minutely observed actions and reactions of library users and staff to his innovations, discussed them threadbare in the professional circles and with his colleagues, made copious notes of infirmities and plus points of his experiments. During those days one could see him engaged in serious discussions with academicians, students, government officers, ministers of State and all those who evinced interest in the new discipline of library science. He established a symbiosis between teaching library science and practising it on the floor of the University Library. Those were his best days intellectually. He produced classics of library science while moving about with a sheaf of 5 x 3 slips and a pencil in his hand in the library, in the department, on the Marina beach, in the railway compartment or in his study.

After his premature retirement from Madras, Ranganathan received invitations from Sir Maurice Gwyer, Vice-Chancellor, Delhi University and from Pandit Madan Mohan Malaviya, founder of the Banaras Hindu University. The latter deputed his Vice-Chancellor Dr. S. Radhakrishanan to persuade Ranganathan to join the BHU. Ranganathan had great liking for Delhi University for whom he had already drafted a Development

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Plan in 1942; but perhaps some extraneous considerations weighed in favour of the BHU. From 1945-1947 he remained there as the Librarian and Head of the Department of Library Science. During this short period he virtually transplanted his "Madras experiments" in the reorganisation of the library and the department. Open access system, reference service, classification and cataloguing of books according to his library codes were introduced in a very systematic and rhythmic order. He was hardly through his reorganisation plan that Sir Maurice Gwyer renewed his invitation to him and ultimately he succeeded in bringing Ranganathan to Delhi University. He found Delhi more congenial to work. His one of the notable contributions at the Delhi University was that he produced a distinguished alumni who propagated his ideas in and outside the country. His worthy pupils provided him the much needed relief from routine work in the library. Besides reorganisation of library, which according to its Vice-Chancellor was "a disgrace to the university" he immensely immersed himself in advance level teaching and research. Delhi provided him scope and facilities and environment for exposition of his ideas at the national and international levels. By this time "Ranganathan had become a force. He was dominating international library science and his advice and help was being sought constantly..." Sir Maurice Gwyer was highly impressed by his innovative ideas, scholarly works, missionary zeal and his boundless love for libraries. He arranged for a special convocation in his honour in 1948 to confer the honorary degree of D.Litt. on him for his services in the field of library science. His citation read "He is the father of Library Science in India.... His reputation as Librarian extends far beyond the borders of his own country and his opinion and advice are valued in all lands where librarians are held in honour". From 1957-1959 he was visiting Professor of Library Science at Vikram University, Ujjain. There, he "contributed immensely to the development of syllabi, teaching techniques and preparation of teachers".

Ranganathan was a great library educationist. He perceived that the country cannot afford to educate its librarians abroad. He founded library schools and University departments all over the country. He developed library science as an academic discipline at par with other academic disciplines in the university. He designed library science syllabi which was quite advanced and comprehensive. It was not a carbon copy of what he had seen in London. He designed it to meet intellectual traditions of the country. Universe of knowledge as seen by the Vedic Seers was the most important component of his library science teaching. He firmly believed that a successful librarian should have a very firm grounding in the structure of knowledge, its branching and inter-relationship at various levels. According to Vedic theory of epistemology, knowledge emerges out of *Shunya,* and Ranganathan based his universe of knowledge theory on this principle. In his scheme of knowledge *Vijayana* was first to be experienced by man and so he placed it over other branches of knowledge. In the other schemes of knowledge classification, sciences are placed between social sciences and humanities. To classify books on indology, Indian philosophy, language and literature he designed special schedules in his Colon Classification. Similarly he prescribed special rules for rendering of names of Indian authors, and catalogue entries of Indian classics and other indological literature. Library planning and development was another subject which he included in his syllabi. His view was that library networks should begin with village as a unit and should culminate into national library system. The libraries at the taluka and state levels were important links in his development programme. He designed library science courses so as to create a mass awakening in the country towards education, formal and informal.

The first library school was founded by him in Madras in 1929. It was followed by the departments of library science at the Banaras, Delhi and Vikram Universities. The alumni of these schools who worked as librarians and library teachers were well equipped to effectively meet the emerging modern trends in library science. Delhi school had the dual distinction of starting Ph.D. researches in Library Science and having a full time Professor of Library Science and Dr. Ranganathan was the first to preside over the department. He was the chief architect in planning Indian National Scientific Documentation Centre (INSDOC) and Documentation Research and Training Centre (DRTC) of the Indian Statistical Institute (ISI) to provide advance training in documentation so as to meet the challenging tasks, like depth classification, bibliographic control, information retrieval and indexing and abstracting etc. of literature in almost all branches of human activities. He was for quality education in librarianship. He emphasised that teaching should be based on scientific methodology and analytical approach.

Perhaps one would hardly find an example in the world where an academic librarian also excelled as library jurist. Ranganathan was of the firm view that academic libraries alone would not help in the spread of education and enlightenment among the masses in the country. Like Britain, he wanted that a network of public libraries from village level to national level should be set up in the country. These libraries, he thought would act as catalytic agents in dispelling ignorance and illiteracy among the masses. He drafted the Model Library Act in 1930. It was discussed and adopted at the First All Asia Educational Conference held at Banaras in 1930. He drafted 18 Library bills for various states in the country. He also worked in the area of National System of Libraries and published his plans. National Library System : a plan for India (1946), Library Development Plan with a 30 year programme for India (1950) and National Grid of Public Library System of India (1972) are monumental works in the field of public library system for the country. His health failed, he lost his eyesight and yet the seer did not lose hope to get his library plans implemented by the government. While on the death-bed, he organised an All India Seminar on Public Libraries in Bangalore in 1972. He desired his pupil Prof P. N. Kaula to publish his plans for National Grid of Public Library System for India and "to bring them to the notice of the government particularly the Prime Minister so that India could have a network of libraries."

Ranganathan had a special flair for participating in professional organisations. These, he thought, served as platforms for breaking new ideas, for exchange of experiences and above all these were a symbol of fraternity that is needed for the healthy growth of any discipline. As a young teacher of mathematics he was elected Secretary of the Mathematics and Science Section of the Madras Teachers' Guild in 1921. "These early experiences of SRR were indeed very rewarding. After entering the library profession in 1924, these experiences stood him in good stead in organising and developing library associations, in organising and conducting library conferences and seminars and in committee work". On his assuming the office of Librarian of the Madras University, Ranganathan was invited to deliver presidential address at the Seventh Pudukottai Library Conference in 1926. This was his first interaction with library officers of the country. At the all India Public Library Conference (1927) in Madras he kept the audience spellbound by his ingenuity in organising a book exhibition and a lantern lecture showing slides on the British Library-in-action. He was founder Secretary of the Madras Library Association. From 1928 to 1972 he was deeply involved in professional associations work at the national and international levels. Whenever he was unable to attend any such conference, he would send a symposium of papers on his behalf. His scholarly papers were always given prime place in the proceedings of the conferences. His work on expert committees in and outside the country has been of the highest order. He served on several committees pertaining to librarianship, library science and documentation. He also served as Chairman, Documentation Committee of the Indian Standards Institution (ISI) (1947); Member of the Indian National Committee for Cooperation with UNESCO (1948-1958); Member, International Committee of Library Experts (UN) (1948-1958); Rapporteur General FID/CA (1951-1966); Secretary and Chairman, FID Committee on General Classification (1954-1964); Chairman, Library Buildings, Fittings and Furniture Committee of the ISI (1958); Chairman, Library Committee of the UGC (1958-1959); Chairman, Review Committee on Library Science UGC (1960); Chairman, International Study Conference on Classification, Denmark (1964). He was appointed National Research Professor in Library Science in 1965.

Scientific management of libraries was of utmost importance to him. His "Madras experiment" provided him enough background material to build up a theory of library management. Physical planning of library building, layout of various departments in the library, job analysis, time scheme, statistical interpretation of library data, inter-departmental coordination, staffing pattern, financial management, input output analysis, standardisation of library equipments, furniture and stationery items, sectional diaries, in-service training and staff development, public relations and accountability for work performance are a few of the many management techniques he prescribed for libraries. His *Library Administration* (1935) is a magnum opus in the field of library management. It specifies thousands of components of jobs which are performed in a library. All such jobs have been spelled out like programmed instructions for library managers.

The genesis of Ranganathan's theory of Faceted Classification and Classified Catalogue Code can be traced in a set of normative principles and laws, canons and devices he created during the course of his working on the floor of the Madras University Library. Besides the famous *Five Laws of Library Science,* he also created other laws, 55 canons, 13 postulates, 4 principles for facet sequence, 18 principles for helpful sequence, and 9 devices. All these normative principles are applied to translate the contents of the document in classification language and in rendering catalogue entries of documents of all types.

Today we talk of modernisation, computerisation and development of local area networks in libraries. Ranganathan's ideas about library organisation had been ultramodern all through. He had set up local area network in Madras as far back as in 1928, his interlibrary cooperation, resource sharing at the national and international level were precursor of INFLIBNET programme of today. His concept of reference librarian, and his interaction with the user and other departments in and outside the library was nothing short of computer based reference service. He had devised manual aids for searching information, these aids are more reliable and subject to all sorts of permutations, which a computer is also capable of doing. His concept of collection of reference tools and development of local reference tools was like on-line bibliographical service of today.

Ranganathan remained a doyen of Indian Librarianship from 1924-1972. This period is called the "Age of Ranganathan" in the annals of Indian library science. He also occupied a prime place in the international library scene during this period. His contribution is massive and permanent. He created a new school of thought and awakening about library science in the country. He was recipient of numerous national and international honours and awards in recognition of his services. He was awarded Padmashri by the Government of India in 1957. The International Federation of Documentation (FID) conferred honorary membership of the organisation on him. His citation read asunder :

"In commemoration and honour of his many important contributions to Library Science and his creation of the Colon Classification as well as his multiple activities in promoting the intellectual and cultural cooperation between the Eastern and Western Worlds"

He was really a great soul.

SHIFTING CAREER CHOICE OF YOUTH IN 2005 A.D.

Hema*

Introduction

In the millenium to come, a new wave of educational reform is anticipated. The competitive and informative age will develop curiosity to specialise in new areas. Thus, the educational goals should be set according to the probable and preferable future values of youth. In the light of the anticipated changing values of youth, Passi and Hema (1991) conducted a Delphi study to explore the probable future values of youth from 52 experts at the National level. The panel opined that more than 70 percent of youth will select a course which is creative and innovative by the year 2005. It is also forecast by the experts that only 20 percent of youth will prefer to choose a career of their father's during the first decade of the 21st century. These findings of the probable future values indicate a shift in the career choice of the future youth. But whether these probable values will be preferred by the future youth is a question to be examined. An attempt has, therefore, been made to study the preferred future values of youth.

Objective

To study the probable and preferable future values of youth amongst secondary school students.

Hypothesis

There will be no significant relationship between probable and preferable future values of youth in terms of career choice amongst secondary school students.

Sample

From amongst the available schools of Indore city, four schools were selected. Random sampling technique was employed to select the sample for the study. Thus, 323 students of Indore city formed the total sample. Subjects ranged from age thirteen to fifteen years.

Tool – Probable and Preferable Future Value Scale (PPFVS)

The probable and preferable future value scale (PPFVS) was prepared to assess the probable and preferable future values of youth amongst secondary school students. The PPFVS was designed covering seven aspects of the family, which included family relationship, education, career, religion, health, recreation and marriage pattern. PPFVS consists of eighteen items. The reliability of the tool was .72. It was established through test, re-test method.

Statistical Analysis

Chi-square was applied to test the null hypothesis. Content analysis was done to analyse the qualitative data.

Table 1 Probable and Preferable Career Choice of Future Youth

Items	*Probable Future Values*	*Preferable Future Values*			*Chi Square*
		Desirable	*Neutral*	*Un-Desirable*	
In 2005, Youth should be expecting more *Freedom* from their parents so as to join any course and college they want	A	199	17	14	*
	N	4	28	2	159.28
	D	13	33	13	
In 2005, youth should be displaying *less Respect* to their father by avoiding the same career as that of their father	A	123	11	14	*
	N	18	56	8	252.28
	D	16	10	67	
In 2005, youth should be *Critically Examining* the opinion and suggestion of parents	A	130	11	35	*
	N	8	45	8	174.68
	D	28	11	47	
In 2005, youth should be expecting *Self-respect* from their parents	A	167	15	29	*
	N	6	34	9	135.38
	D	18	20	25	
Youth should be exhibiting more importance for their *Personal Growth* in 2005	A	163	24	36	*
	N	6	48	5	160.53
	D	11	9	22	

* Significant at 0.01 level

It is evident that the chi-square value for all the five items related to probable and preferable values Vs career choice were found to be significant at 0.01 level. This testifies, that there is a significant relationship between the perception of secondary school students on

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** Research Scholar, Devi Ahilya Vishwavidyalaya, Indore-452001* probable and preferable future values in terms of career choice. Hence, the null hypothesis as stated that there will be no significant relationship between probable and preferable future values of youth in terms of career choice amongst secondary school students, has been rejected.

Discussion – Probable and Preferable Career Choice of Future Youth

As many as 199 repondents anticipated, that the future youth will expect freedom from parents, so as to join any course and college they want. Perhaps, in future there may be many courses that will be open for youth to select. Moreover, this trend of demanding freedom is prefered by the secondary school students because they anticipated that the future generation will be challenging and adventurous. Here it reflects the respondents value of freedom to choose any course of their interest.

Majority of secondary school students opined (N-123) that the youth of the horizon, will not choose the same career as that of their fathers. Probably in future, skill oriented career will become outdated. At the same time, the secondary school students manifested their view, of avoiding the same career as that of their father, to an extent of displaying less respect. This indicates the high degree of value of freedom to choose the career they want.

Maximum of 130 respondents expressed their opinion, that the youth of the coming decade will be critical in examining the opinion and suggestion of their parents. This entails, that the youth of future may have analytical and rational thinking. Moreover, the same set of students preferred this value of critical examination. This however unveils the fact, that the trend is already existing in the present youth, and they want this trend to continue to exist even in future. They had even foreseen that the information age may require such thinking to defend themselves from parents.

It is forestalled by 167 secondary school students, that in the years to come, the youth will expect self-respect from their parents. Perhaps, they may involve in creative and innovative work which needs recognition and self-respect. So also the same set of students preferred the value self-respect, probably, in future there may not be any specific value, that only parents and elders should be respected. The trend might even reverse, anyone who does a recongnisable work should be respected irrespective of age.

As many as 163 secondary school students had foreseen the trend of youth exhibiting personal growth in the decade to come. This points out that career, comforts and recognition will play its role in future. The same set of student preferred personal growth, for the reason that self-satisfaction, acquiring higher status and being self-reliant will be considered virtuous for the future youth.

Future Scenario – Preferred Career Choice of Youth of Tomorrow

The unforeseen futures will be open with wider options and possible alternatives. Youth of the future will aspire to select a challenging course to suit the needs of the situation. They may even expect a change in the curriculum and education system as a whole. The present secondary school student expressed their view on the career choice of the forthcoming generation. According to them, the future youth will select career based on interest and aptitute. The advent of science and technology will create new job opportunities. Fascinating areas like computer science, space research and bio-technology will be the interest of the age. The youth would prefer to choose the career that benefits them economically. Importance will not be given to tradtiional occupations. Therefore, adopting the profession of one's own father will be out of question in future. Economic necessity will make the youth strive for personal growth.

From the social point of view, the millenium will be a world of competition. The youth will have fixed goal in their life, and they will strive hard to achieve it.

Psychologically speaking, intellectual growth is anticipated in the years to come. Maybe the information age will develop critical thinking. The youth may examine, analyse and judge any issue before they take a decision. This may result in scientific thinking and will help to overcome the prejudice. High ambitious youth will expect reward for their adventurous deeds from parents. But, simultaneously they will demand self-respect from parents, siblings and relatives. Curiosity will lead to invention and discovery of new things in their life.

Present school going students had foreseen the ability of future youth to solve problems on their own. It may be a small social, emotional or intellectual problem. Yet, they will not depend on their parents. Mostly the youth will crave from parents emotional security, motivation and encouragement for their innovative work.

Conclusion

Value of independence and freedom is evidenced in future youth in respect of career choice and education. However, intra-conflict or dilemma would exist in the different options to choose either career or education.

Marching Towards Global Peace and Development

The National Convention of the International Association of Educators for World Peace (IAEWP) was recently organised at KRIBHCO Township, Surat. The convention adopted the following declaration.

IAEWP KRIBHCO SURAT DECLARATION

Having discussed in detail the theme 'Marching Towards Global Peace and Development' from the point of view of (i) Peace education through non-formal system, (ii) Visualising a non-violent society in the 21st century through environment protection and vegetarianism, (iii) Peace through environment education, (iv) Peace education for international understanding, and (v) Continuing education for communal harmony, social justice and industrial peace etc.,

Having felt the dire necessity for peace education to march towards development in the world specially in the third world countries,

Having urged that development must be linked with the protection and promotion of human rights for any peace – individual, national and global, human rights education under the discipline of peace education should be part and parcel of all phases of education from school through university to out of school education,

Having felt that environment education can bring together people & countries of South Asia much closer and more effectively, the politicians and diplomats & SAARC should take the lead,

Having convinced of the need to evolve nonformal system for educating our people to development of non-violent attitude among the people to maintain peaceful coexistence in the society at local and global level to promote the idea of disarmament, communal harmony, national integrity, anti-terrorism etc. for the betterment of mankind on the earth to lead them for their development through peace education, the formal education system needs to be modified, extended, supplemented, complemented through alternative parallel system of non formal education to educate our people on mass scale, is a must which is to become national policy of education,

Having perceived the involvement of women and youth which form the largest section of population, felt that they be given responsible role in activism for peace education to lead to non- violent society may be through vegetarianism and protecting our environment for development is the need of an era,

Urge on all concerned, to form 'one world' which is of utmost importance that people at all levels ought to be educated to inculcate and promote the philosophy of 'oneness' among individuals and nations. Non formal education programmes of peace education bearing the basic fundamental elements of international understanding and communal harmony to develop a just society and maintain industrial peace. Varieties of short-term part-time continuing education programmes are to be developed and executed continuously and the Departments of Adult-Continuing Education and Extension Work of universities must be statutorily recognised and provided with non formal education faculty so that larger sections of the society i.e. poor, illiterate, socio economically backward people who have been deprived and oppressed should have an access to 'learning for being' and contributing towards individual, community, national and global development peacefully,

The very motto of 'education to liberate' can be fulfilled by introducing peace education from preprimary to university education in formal structure of education and community at large throughout the education system,

To support the activities of universities and departments engaged in peace research and studies as well as nonviolence in action so that peace consciousness be instilled in the minds of youth.

To nominate one of the IAEWP's life members to the UGC, NCERT, Department of Human Resource Development of Govt. of India as well as states for preparing curriculum at the respective level and to suggest modifications for incorporating peace education in schools/colleges/universities,

To organise national workshops for the preparation of syllabi for peace education course, carry out research and follow up studies, and

To recognise work in the field of peace education as social work and community development and honour dedicated workers, and

To rally round the flag of IAEWP leaving behind political, religious and sectorian feelings making it more and more effective.

Orientation Programme for Principals of Women's Colleges

The Department of Education Management of the SNDT Women's University, Bombay, in collaboration with National Institute for Educational Planning & Administration (NIEPA), New Delhi, recently organised an Orientation Programme for Principals of Women's Colleges, at its Churchgate Campus.

The objectives of this orientation-cum-training programme were to sensitise participants to key issues in higher education, with specific reference to the education of women and their development, to identify and focus on the special management needs of women's institutions, to provide an opportunity for interaction and sharing of experiences between college principals and experts, and to facilitate their networking.

The Programme was interactive in nature; it started with the sensitization of the participants to the unique features pertaining to the education of women students, and focused on the required knowledge and skills to facilitate development of positive attitudes.

Participants were provided time for individual discussion with faculty, for self-study, library reference and reading and for informal group discussions.

They selected for presentation one or two areas relating to the women's development in which they had specialized. At the end of the programme, they were guided in working out action plans at the personal level and institutional level which they intended to implement on their return to their respective colleges.

After being taken through the context of women's education in the past, the changing face of education today and the National Perspective Plan for Women, the participants were required to reflect on the role and function of principals in a women's education institute.

A sharing of experience by the participants of the difficulties faced at their institute was followed by the SNDT faculty sharing their experiences in restructuring courses, administrative units, etc.

Both concepts and practices relevant for functioning were interspersed with field visits to institutions. These visits deepened the theoretical inputs with experiential insights and personal interaction with principals and administrators of other institutes.

The organisational diagnosis was followed by an appraisal which led to action plans being formulated, for implementation on their return to their respective colleges.

The 13-day programme was attended by 21 principals of women's colleges affiliated to universities in the States of Maharashtra, Gujarat and Karnataka. They were helped to understand, analyse and apply management concepts and practices relevant to the effective functioning of women's colleges. The keynote address was given by the Vice-Chancellor of SNDT Women's University, Dr. Suma Chitnis. The closing remarks were made by the Joint Director of NIEPA, Dr. Baldev Mahajan.

Besides faculty from SNDT, Bombay, and NIEPA, Delhi, there were also experts from Xavier Institute of Management, S.P. Jain Institute of Management and St. Xavier's College.

The co-directors of the programme, Dr. Lena D'Souza of SNDT Women's University, Bombay and Dr. Jaya Indiresan of NIEPA, Delhi, were ably assisted by Fr.A.Bulchand, S.J. of Xavier Institute of Management, Bombay.

UNDP Assistance to Forestry Research

The United Nations Development Programme (UNDP) will provide assistance worth $2.56 million (Rs. 7.5 crores) over a five year period to the Government of India, as part of a recently-signed project aimed at enhancing the contribution of forestry to rural development in India, by strengthening the capability of Indian Council of Forestry Research and Education (ICFRE) and its six institutions to undertake forestry research.

The long-term aim of the project is to increase the productivity of wood and other forest produce by applying modern scientific methods and technology. It will develop plantation models, compatible with land capabilities and the resource needs of users, which lend themselves to willing adoption by farmers and tribals.

ICFRE was created in 1987 by the Government of India as an autonomous apex body responsible for the organization and management of research and education in the field of forestry in India. One of ICFRE's major mandates is to develop and propagate forest extension programmes to benefit farmers, poor tribals and the wood-based industries. It guides and supervises the work of the Institute of Arid Zone Forestry Research, Jodhpur; the Institute of Wood Science and Technology, Bangalore; the Institute of Forest Genetics and Trees Breeding, Coimbatore; the Institute of Deciduous Forest Research, Jabalpur; the Institute of Rain and Moist Deciduous Forest Research, Jorhat, and the Forest Research Institute, Dehradun.

UNDP assistance will help procure much needed specialized research equipment and streamline research method. Vital collaborative and training and exchange contacts with research institutions and researchers of other countries will also be developed.

The project envisages development of linkages and procedures for the transfer of research findings to user agencies, and their testing and demonstration through training, especially via "lab- to-land" programmes. Greater interaction between scientists of the ICFRE institutes and officers of the states Forest Departments and other organizations to private sector, educational institutions, NGOs, farmers and tribals is also an important objective of the project.

UNDP has been in the forefront of international support to forestry research in India. Notable recent efforts include support to the Wildlife Institute of India, Dehradun; establishment of a training centre for mechanical wood industries at the Indian Plywood Industries Research Institute, Bangalore; assistance to research in agroforestry at the Central Soil and Water Conservation Research Institute, Dehradun; and demonstration of modern techniques in controlling and preventing forest fires.

Rosary College Environmental Club

The Rosary College of Commerce Navelim, Salcete, Goa, has started an environmental club to impart environmental education to the students. Prof. Armando Coelho, Head of Department of Physics at St. Xavier's College, Mapusa, who was the chief guest at the inaugural function, spoke about some aspects of environmental problems, namely, water and air pollution, nuclear radiation, and the problems of deforestation. He explained how the "Green house effect" resulted in raising of temperature. He also described how the toxic silicate particles from asbestos sheets could harm man. Oil sticks polluted water, and deforestation affected rainfall. He estimated the value of one tree to the environment as being worth lakhs. People should begin to calculate costs on the 'environmental value scale'. He advised students to carry the environmental message to their families, villages and towns.

Eufemiano Fernandes, a second year B.Com. student, presented a paper on the 'need for environmental awareness and protection'. He shared his views on how modern man, with his various economic activities, had abused, trespassed and transgressed against every mandate of nature. A techno-oriented civilization needed ecological resources for its survival and growth, but there should also be a control over the utilization and depletion of resources. Unfortunately, only a very small section of our population was aware of the various aspects of environmental degradation and the threat it posed to our health. It was the moral responsibility of each and every Indian citizen to save our environment, he felt.

CSIR Golden Jubilee Celebrations

The President, Dr. Shankar Dayal Sharma, today stressed the need to build "scientific consciousness" among children and youth, in the universities and in all walks of national endeavour. He was speaking at a function in New Delhi to mark the conclusion of the golden jubilee celebrations of the Council of Scientific and Industrial Research (CSIR). Dr. Sharma said science was not merely training to do a job but also to think in a particular way. He said the CSIR exerted a positive influence by instilling and nurturing what Pandit Nehru called the "scientific temper."

Emphasising the need to encourage the scientific approach in the country, Dr. Sharma said the scientific community and scientific establishments had a major role to play in the years ahead in ensuring the welfare of the people.

The Minister of State for Science and Technology, Mr. R. Kumaramangalam, stressed the need for strategic linkages between engineering students and financial institutions for turn-key projects. He said the CSIR had to help meet the challenges of liberalisation of the economy.

On the occasion, the president gave away the CSIR Young Scientists' Award to nine persons. The award consists of Rs. 10,000 in cash, a memento and a citation. The nine who got the award were: Dr. M.I. Khan and Dr. Yogendra Sharma (biological sciences), Dr. G.V. Madhava Sharma (chemical sciences), Dr. B. Chakroborty and Dr. V. Ramaswamy (atmospheric sciences), Dr. S. Chattopadhyay and Dr. V.V. Ranade (engineering sciences) and Dr. V.N. Ojha and Dr. S.M. Shivaprasad (physical sciences). A commemorative stamp on the CSIR golden jubilee was also released on the occasion.

The President also presented the CSIR technology prizes to 14 scientists for individual or group achievements. The CSIR technology shields were given to the Central Electronics Engineering Research Institute (CEERI), Pilani, and the Central Drug Research Institute (CDRI), Lucknow.

Information Technology Institute for AMU

The Aligarh Muslim University (AMU) will set up an institute of information technology at a cost Rs. 26 crore. According to the AMU Pro-Vice-Chancellor, Mr. Abul Hasan Siddiqi, the Prime Minister Mr. P.V.Narasimha Rao, had approved the project in principle. He said the institute would establish a link between university programme and industrial groups, both in the private and public sectors.

Prof. Siddiqi said the institute would have frequent contact with international experts in the field. Interaction between Third World countries especially countries of the south-east Asia, and the West Asia is one of the prime objectives of the institute, he said.

To start with the institute will conduct a short term course in topics of current interest, a one year diploma course, a two year M.Sc. course in informatics and a Ph.D programme.

Cold Treatment of Cotton Textiles

The Department of Industrial Chemistry, Alagappa University, Karaikudi, in collaboration with the Rotary Club of Tirupur South and Tirupur Dyers' Association, recently organised a Seminar-cum-demonstration on Cold peroxide bleaching of cotton textiles. Dr. K.Nagappan, Vice-Chancellor of Alagappa University presided over the function and Dr. V. Sankaranarayanan, Member-Secretary of the Tamilnadu State Council for Science & Technology was the chief guest on this occasion.

Prof. V.G. Kulkarni, Principal Investigator and Professor & Head of the Department of Industrial Chemistry, welcomed the gathering and presented the technical progress report on the research project which was followed by a question-answer session. Dr. Kulkarni traced the importance of the project in relation to the energy conservation over energy consumption and concluded that the cold treatment with respect to the degree of whiteness, dye uptake and absorbency of treated cloth was in no way inferior to the conventional hot treatment. The seminar was well attended by the hosiery processors of Tirupur.

Course on River Basin Management

The Centre for Remote Sensing in Civil Engineering Department, University of Roorkee, proposes to organise a Short Term Course on "River Basin Management using Digital Remote Sensing Techniques", on December 9-19, 1992. The Course is designed for Engineers, Planners and Managers involved in Water Resources Management. The analysis technique based on Digital Image Processing of Satellite Data will be used for River Basin Management, including Hydrological and Erosion Modelling. On hand experience on Digital Image Processing of Satellite data and demonstration of actual case studies in River Basin Management will also be given.

Further details may be obtained from Dr. R.S. Tiwari, Professor of Civil Engineering Department & Coordinator, Centre for Remote Sensing, Civil Engineering Department, University of Roorkee, Roorkee - 247667.

Rosary College Women's Cell

A women's cell was recently inaugurated at Rosary College, Navelim, Goa. In her inaugural address Mrs. Inez Cotta Carvalho, prominent social worker and member of the Consumers Redressal Forum, said that Indian women had tied themselves in knots due to their superstitions and this had tended to add to their problems. This situation, she said, could be rectified if women worked together. She emphasised the fact that women were capable of excelling in all fields and thus should not restrict themselves to stereotype roles.

Principal Newman Fernandes spoke about the exploitation of women in different sectors and mainly in the home. He stressed that household chores should be shared equally by both men and women and this could be made possible only if women realised that they were not inferior as they were made to believe in the past. Principal Newman emphasised the role students could play in helping women realise their potential.

In her paper on "The Plight of Indian Women", Mary Ann Baretto, a first year B.A. student, said that although women were capable of playing a significant role in society, they were unable to do so as they were often discriminated against. The illiteracy of women largely contributed to their problems and education was the only tool that could help them realise their self-worth and stand firmly against injustice. She pointed out that every woman's issue was a general issue, and it was therefore everyone's responsibility to act.

Bhatnagar Awards

The Council of Scientific and Industrial Research (CSIR) recently announced the names of 11 Scientists selected for the 1992 Shanti Swarup Bhatnagar Prizes, the highest and most coveted awards for science in the country. The CSIR Director-General Dr. S.K. Joshi made the announcement at a function in New Delhi to mark the conclusion of golden jubilee celebrations of CSIR.

The 11 recipients include Dr. Dipankar Chatterji from the Centre for Cellular and Molecular Biology, Hyderabad, and Dr. K. Dharmalingam from Madurai Kamaraj University, for their work in biological sciences.

Dr. Sumit Bhaduri from the Alchemie Research Centre, Thane and Dr. S. Ramasesha from the Indian Institute of Science, Bangalore, will get the award for chemical sciences, while for earth, atmosphere, ocean and planetary sciences, it will go to Dr. S.R. Shetye from the National Institute of Oceanography, Goa.

The other prize winners are Dr. V.S. Borkar from the Indian Institute of Science, Bangalore, for engineering sciences; Dr. Maithili Sharan from the Indian Institute of Technology, New Delhi for mathematics; Dr. N.K. Mehra from the All India Institute of Medical Sciences, New Delhi and Dr. U.N. Das from the Nizam's Institute of Medical Sciences, Hyderabad, for medicine and Dr. S.R. Shenoy from the University of Hyderabad, and Dr. Vikram Kumar from the Solid State Physics Laboratory, New Delhi, for physical sciences.

NIH & AIIMS to Collaborate in Research on Fertility Control

The US National Institute of Health (NIH) has entered into an agreement with the All India Institute of Medical Sciences (AIIMS) to conduct collaborative research on fertility control in primates, providing Rs. 72.16 lakh to support the projects. US Ambassador Mr. Thomas Pickering presented the first cheque of Rs. 28.5 lakh to the AIIMS Director, Dr S.K. Kacker, in New Delhi recently.

The three year project, titled "cellular and molecular basis of blastocyst implementation in the primate" would develop a core of basic research in primate implantation biology.

Implantation is a fundamental step in the establishment of conception and thus forms a target for controlling fertility. The project is designed to develop an understanding of the cellular and molecular basis of embryo viability and endometrial maturation of implantation in the primate, besides testing the paradigm that an integration exists between these two during the pre- and post-implantation of gestation.

Vidyasagar Death Centenary Lectures

The School of Vedic Studies of Rabindra Bharati University, Calcutta, organised a series of lectures to commemorate the death centenary of Pandit Iswar Chandra Vidyasagar, a renowned scholar and promoter of Sanskrit Studies and a great social reformer of the nineteenth century Bengal. Prof. Pabitra Sarkar, Vice-Chancellor of the University, inaugurated the lecture series and welcomed this venture catering to the needs of the academics interested in Indology.

Dr. Narendranath Bhattacharya, a U.G.C. Visiting Fellow of the Department of Sanskrit, who delivered the lectures, dwelt on various aspects of Vedic history and culture. They included Vedic evidence and Indian archaeology, geographical information and Aryan settlement, sociology, caste, economy and judiciary.

Ambedkar Chair for Aligarh

The Union Government has decided to create an Ambedkar chair in the Aligarh Muslim University for conducting research in consonance with the socio-political ideology and legal philosophy of late Dr B.R. Ambedkar. This was revealed by the AMU Pro-Vice-Chancellor Prof. Abul Hasan Sidiqui in Aligarh recently.

News from Agricultural Universities

Research Bulletin on Faba Bean

A Technical bulletin entitled, Faba Bean : A Potential Feed and Food Crop has been released by the Haryana Agricultural University for the dissemination of latest technology pertaining to chick pea (pulses crop) among maximum number of farmers, extension workers and researchers. The bulletin is based on the research conducted by the authors, Drs M.A Akbar, Y.S. Tomer, P.L. Gupta and N. Singh.

In the Foreword to the bulletin Dr. A.L. Chaudhary, Vice-Chancellor says that traditionally, chick pea has been the major food legume in Haryana as it accounts for more than 95 percent of area and production of all the food legume. With the increase in irrigation facilities, the area under chick pea production has increased. In such a situation, taking up cultivation of grain legume like Faba Bean, farmers can be benefited intensely and also farming of Faba Bean can be well adapted in their cropping pattern and irrigated farming system of Haryana.

By disseminating the technology pertaining to the cultivation of Faba Bean, scientists hope that being rich in protein and comparatively low cost in the cultivation, Faba Bean can prove to be a promising source of both food and feed. They also feel that the effective utilisation of this pulse crop in the diet of the livestock and poultry can bring genetic improvement in them.

News from UGC

Countrywide Classroom Programme

Between 24th October to 31st October, 1992 the following schedule of telecast on higher education through INSAT-1D under the auspices of the University Grants Commission will be observed. The programme is presented in two sets of one hour duration each every day from 1.00 p.m. to 2.00 p.m. and 4.00 p.m. to 5.00 p.m. The programme is available on the TV Network throughout the country.

Ist Transmission
1.00 p.m. to 2.00 p.m.

24.10.92

"Nrityaganga-III"

"Inside the Smithsonian: The Information Age – A Videowall Experience"

"Week Ahead"

25.10.92

No Telecast

26.10.92

"Indian Agriculture – Technoogy, Prices and Beyond"

"Innovation: Return to the Sea"

27.10.92

"Performing Titration"

"Lasers in Medicine"

28.10.92

"Adaptations of Millipedes"

"Pixels and Landscapes"

"Pages from History: The Egyption Mummy

29.10.92

"Optical Fibre Cables"

"19th Century Russian Literature: Fyodor M. Dostoyevsky"

"The City That's Miles Better – Chandigarh"

30.10.92

"Understanding Visual Language"

"Ariance, Direct Flight"

"Mental Illness – Reaching the Unreached - I"

31.10.92

"The Pursuit"

"Yours Sincerely"

"Week Ahead"

2nd Transmission
4.00 p.m. to 5.00 p.m.

24.10.92

"Interpreting Tamil Nadu Folk Performing Arts"

"Design-I"

"Week Ahead"

25.10.92

No Telecast

26.10.92

"Photoelectric Effect-III"

"Packaging Industry-I"

"External Borrowings-II – Impact and Consequences"

27.10.92

"Imagery and Graphic Animation"

"A Case for Preventive Medicine"

"Dental Caries – Tooth Decay"

28.10.92

"Tree Grass"

"The Multicrop Combine Harvester"

"Herbarium-I"

29.10.92

"Functional Linguistics-I: Functions of Communication"

"The Impact of National Movement in Telugu Literature"

30.10.92

"Vedic Mathematics-VIII: Squares and Square Roots by Dwandue Yoga"

"Population of India – Some Perspectives"

"The Little Working Hands"

31.10.92

"The Pursuit"

"Yours Sincerely"

"The Week Ahead"

Sports News

Workshop on Management of Physical Education and Sports

The Association of Indian Universities, in collaboration with Mahatma Gandhi University, Kottayam organised a National Workshop on Management of Physical Education and Sports in Universities and colleges at Cochin on September 15-18, 1992. The major themes identified for discussion at the workshop were :

(1) Mass participation of students in physical education and sports programmes in universities and colleges;

(2) Management and Funding of physical education departments in colleges/universities including infrastructural sports facilities and quality control of sports goods;

(3) Effective Management of competitive sports in the university sector;

(4) Selection, training and coaching for higher level performance;

(5) Incentives, Awards and motivation in sports;

(6) Women and Sports; and

(7) Public relation and sports journalism in physical education and sports.

After the inaugural function, at which Padmashri Dr. P.M.Joseph, the doyen of Physical Education in India was the guest of honour, deliberations were held in seven scientific sessions. After detailed discussion the workshop arrived at the following consensus :

(i) To improve and promote the quality of participation and performance among college and university youth (boys-girls), physical education and sports activities needed more emphasis in addition to the existing extramural sports and games;

(ii) To ensure 100% participation – physical education and sports activities be opened out with the use of existing infrastructural facilities in colleges (rural and urban) and university centres;

(iii) Ensure uniformity in all professional institutions giving training in physical education in India;

(iv) More emphasis on Women's Sports at the college – university level under qualified women physical education teachers – sports coaches;

(v) To have a separate financial provision at the Central/State Government level for the promotion and development of physical education and sports;

(vi) To evolve a 'Developmental Strategy' for the promotion and development of physical education and sports in India;

(vii) To ensure proper selection of sports teams – proper conditions and training and exposure to competitive sports at colleges/universities;

(viii) To tap talents from tribal area students and arrange appropriate physical education and sports programmes to draw them into high level competitive sports;

(ix) Emphasis on 'Scientific Sports Journalism' and in this new effort physical education teachers and sports coaches can play a vital role;

(x) To have an accreditation council of physical education on par with I.M.A (Indian Medical Association) to ensure implementation of standardisation of norms as per UGC/Govt./Professional norms/Ethics; and

(xii) To have adequate public relations and the use of media (T.V. Radio, Newspapers etc.) to give publicity at the right time for physical education and sports activities carried out by colleges and universities.

50 delegates from various universities, institutes of physical education, colleges from all over India participated. In addition, 56 delegates from the colleges located in the Kerala State also attended the workshop.

Dr. A.Sukumaran, Vice-Chancellor, Mahatma Gandhi University, presided while Mr. E.T.Muhammed Basheer, State Education Minister, was the chief guest at the valedictory function. Mr. E.T.Muhammed Basheer, presented the Dr. B.L. Gupta General Championship Trophy to Prof. S. Rajagopalan, Pro-Vice-Chancellor, Kerala University. This trophy is awarded to a university for its excellence in Inter-University tournaments.

Prof. S.K.Agrawala, Secretary, AIU, presented the prize-money to seven universities, viz, Mahatma Gandhi, Kerala, Delhi, MDU(Rohtak), Meerut, Osmania, and Burdwan, for their winning performance in different disciplines of sports. Other prize winning universities who could not be present at the function were Calicut, Panjab, Guru Nanak Dev, Poona, Mysore, Haryana Agril, Punjabi, Manonmaniam Sunderanar, Punjab Agril, Goa and Shivaji.

News from Abroad

Breath Test to End Surgery Nightmares

Once dismissed by doctors as neurotic dreams, distressing cases of patients "coming round" during major surgery are now being taken seriously by growing numbers of clinicians. Following the first controlled studies of such cases, two doctors at Manchester University in England believe they have a solution which could almost completely eliminate the problem.

Their early warning system examines the pulse rate and isolates changes which are linked to breathing thus measuring the depth of anaesthesia. The device, which its inventors say is currently at the "Heath Robinson stage", will be developed into a self contained unit which will go into hospital trials next year.

Neurophysiologist Chris Promfrett said premature emergence from anaesthetic was a problem which doctors were now taking seriously for the first time. The public were also becoming more aware of such dangers and successful litigation was on the increase. The problem was extremely difficult to quantify, he said, although one study found as many as 14 percent of women undergoing Caesarean sections experienced some level of awareness. Other more general studies have found a much lower incidence.

"This is a serious problem and there is a definite shift in attitude on the part of the medical profession," Dr Pomfrett said, "Patients assume they will be asleep throughout their surgery and it is naturally very traumatic for them if they do wake up prematurely and find they are paralysed with a tube down their throat and their breathing artificially controlled – it breaks our contract with the patient."

There were many cases of patients dreaming during operations and imagining feelings of pain, he added, but research carried out recently at Nottingham University had, through structured interviews, isolated genuine cases where patients recalled specific events, words or phrases during surgery.

Incidence varies according to the type of surgery but Caesarean sections may run higher risks since anaesthetic is kept low to protect the baby. Thomas Healy, head of Manchester University's department of anaesthesia and co-inventor of the new system said he had read accounts of women who had felt a hand in their abdomen during that operation and others who were awake during amputations. "This is obviously a horrific experience and seriously affects people psychologically afterwards," he said.

Professor Healy said he believed reported incidences could be on the low side since many anaesthetic drugs had an amnesia effect which meant patients might not remember feeling any pain after the event. Some were only able to report their experiences during hypnosis, he said.

The inventors say their early warning system, which works in real time allowing the anaesthetist to monitor the depth of sedation, is simple to use and does not add to the anaesthetist's workload. A £ 45,000 prize gained through the government's SMART scheme will be used to construct six prototype systems for trial in hospitals associated with Manchester University.

If successful, Dr Pomfrett said problem could be eliminated in all but a very few cases where the patient's nervous system was severely damaged.

Sound Clue to Air Crashes

Researchers at Southampton University in England are investigating the use of data from the cockpit voice recorder – one of two "black boxes" carried on civil aircraft -to identify and interpret vibrations resulting from a catastrophic event, such as an explosion or rapid decompression in the aircraft cabin.

They believe the cause of failure can be found more easily by extracting relevant information from background "noise" in the black box recording and building up a mathematical model of the structure of the aircraft which can be used in test to help accident investigators draw conclusions from their findings.

Joe Hammond, Director of the Institute of Sound and Vibration Research at the University, said the signal from the black box could be processed in such a way as to identify an interruption in the background noise, and this information could be analysed and interpreted as long as the signal was not completely saturated.

He said: "When you have a very complicated phenomenon, like a blast which causes shock waves both airborne and through the fuselage, the microphone will pick up both. We are trying to utilise this information so that we can say more about the size and the nature of the explosion."

Work on the project, co-ordinated by research fellow Stuart Dyne, has been supported by money passed on by Michael Charles, a Farnborough accident investigator, who was awarded $ 25,000 for outstanding efforts to protect air travellers from acts of terrorism. Professor Hammond said the techniques developed at Southampton might eventually be used to help investigations into events like the crash at Lockerbie.

"The broad objective is to be able to provide better information to crash investigators with a new way of processing important data," he said.

Andre Lichtwitz Prize - 1992

The French National Institute for Health and Medical Research – INSERM will award this year the 1992 "Andre Lichtwitz" Prize amounting to 50,000 FF (approximately Rs 3 lakhs). The Prize is intended for a young investigator, of any nationality, who has distinguished himself/herself over the year by his/her research in the field of : "Calcified tissues and cartilage : metabolic and physiopathological studies".

The applications, either in English or French should be accompanied by 10 copies each of the following documents : bio-data, summary of scientific work, list of publications, reprints of major publications over the last 5 years, any other documents that the candidate considers of interest to the jury.

Interested candidates should send their applications before 15th December 1992, to The Director General, International Relations, French National Institute for Health and Medical Research - INSERM, 101, rue de Tolbiac, 75654 Paris Cedex 13, France.

RESEARCH IN PROGRESS

A list of Research Scholars registered for Doctoral Degrees in Indian Universities

SOCIAL SCIENCES

Library & Information Science

1. Jawahar Lal. **Finanical management in central university libraries in India.** BHU. Dr H N Prasad, Department of Library and Information Science, Banaras Hindu University, Varanasi.

2. Singh, Ram Jivan. **A study of socio-economic influences upon use of university libraries.** BHU. Dr H N Prasad, Department of Library and Information Science, Banaras Hindu University, Varanasi.

Sociology

1. Devan, P K. **Tribal integration with larger society.** Kerala. Dr K Thulaseedharan Pillai, Lekshmi Bhavan, Ushus Nagar, Pangappara P O, Thiruvananthapuram.

Social Anthropology

1. Sahay, Ragini. **Muslim women.** Delhi. Prof J S Bhandari, Department of Anthropology, University of Delhi, Delhi.

Economics

1. Jha, Arya. **Indirect taxation in U P.** BHU. Prof G D Mishra, Department of Economics, Banaras Hindu University, Varanasi.

2. Mishra, Sudhesh. **Mulya sthirita mein rajkoshiya niti kee bhumika: Bharatiya sandarbh mein.** BHU. Dr S C Srivastava, Department of Economics, Banaras Hindu University, Varanasi.

3. Neeraj. **Bharat mein niji evam sarvajanik kshetron ke udyogon mein pravadhan: Ek tulnatmak adhyayan.** BHU. Dr (Mrs) M Srivastava, Department of Economics, Banaras Hindu University, Varanasi.

4. Nepal, Chrianjibi. **A study of industrial labour in Nepal.** BHU. Prof G S Kushwaha, Department of Economics, Banaras Hindu University, Varanasi.

5. Roy, Mala. **India's balance of payments.** BHU. Prof G S Kushwaha, Department of Economics, Banaras Hindu University, Varanasi.

6. Sreedharan, C S. **Household income, consumption, savings and investment in Kerala.** Kerala. Dr M Kuttappan, Joint Director, Department of Economics and Statistics, Vikas Bhavan, Thriuvananthapuram.

7. Tripathi, Rajesh Kumar. **Mulya sthirata mein maudrik niti kee bhumika: Bhartiya sandarbh mein.** BHU. Dr S C Srivastava, Department of Economics, Banaras Hindu University, Varanasi.

8. Yadav, Bhrigu Nath Singh. **Uttar Pradesh mein krishi shramikon ke arthik vikas kee samsyayen.** BHU. Prof D K Mishra, Department of Economics, Banaras Hindu University, Varanasi.

Law

1. Jain, Jaya Kumar. **Hindu Vivah: Samvida ke ore.** Vikram. Dr R C Vyas, 5, Ganji Compound, Indore.

2. Kushreshtha, Sanjay. **Cyprus samasya aur antrarashtriya vidhi ke pehluyon ka adhyayan.** Vikram. Dr G C Kasaliwal, 24, Sarvodya Nagar, Indore.

3. Sharma, Satya Narayan. **Bal sharmik evam unki vaidhanik sthiti: Rajya ke Niti Nirdeshak tatva ke kriyanvyan ke sandarbh mein ek vishleshnatmak yatharthvadi sameeksha.** Vikram. Dr G C Kasaliwal, 24, Sarvodya Nagar, Indore.

Education

1. Pandey, Sarojini. **Physical fitness of inter university female athletes in relation to motor ability and physical measures.** BHU. Dr N B Shukla,Department of Physical Education, Banaras Hindu University, Varanasi.

2. Pant, Janak Nandini. **Factors facilitating and hindering integration of educable mentally retarded children in the primary school system in Kathmandu Valley.** BHU. Dr S S Srivastava, Department of Education, Banaras Hindu University, Varanasi.

Commerce

1. Arun Kumar. **Analysis of financial services sector in capital market.** BHU. Dr A R Tripathi, Department of Commerce, Banaras Hindu University, Varanasi.

2. Dubey, Rishikesh. **Motivation, job involvement and employees performance: A case study.** BHU. Dr Raj Kumar, Department of Commerce, Banaras Hindu University, Varanasi.

3. Pandey, Manas. **New issues market in India.** BHU. Dr A R Tripathi, Department of Commerce, Banaras Hindu University, Varanasi.

4. Pandya, Ajay. **Performance appraisal of cooperative societies in Gujarat: A case study.** BHU. Dr K K Jaiswal, Department of Commerce, Banaras Hindu University, Varanasi.

5. Pati, Ambika Prasad. **Development banking in Orissa: A study of the state level development banks.** BHU. Dr M N A Ansari, Department of Commerce, Banaras Hindu University, Varanasi.

6. Rai, Vinay Kumar. **Job expectation, job satisfaction and motivation to work of banking staff: A case study of selected branches in Varanasi.** BHU. Dr O P Rai, Department of Commerce, Banaras Hindu University, Varanasi.

7. Senapati, Chinmayee. **Personal practices of Orissa State Electricity Board.** BHU. Dr A A Ansari, Department of Commerce, Banaras Hindu University, Varanasi.

8. Singh, Rajesh Kumar. **Monetary compensation and motivation of human resources in B H U.** BHU. Dr S Chandra, Department of Commerce, Banaras Hindu University, Varanasi.

9. Singh, Suresh Kumar. **Financial performance ofSmall-Industrial Development Bank of India (SIDBI).** BHU. Dr A R Tripathi, Department of Commerce, Banaras Hindu University, Varanasi.

10. Singh, Sushil Kumar. **Marketing of drugs and pharmaceuticals in India: A case study.** BHU. Dr A K Mishra, Department of Commerce, Banaras Hindu University, Varanasi.

11. Ujwal, Rajesh. **Working capital management of public sector: A case study.** BHU. Dr C P Mall, Department of Commerce, Banaras Hindu University, Varanasi.

12. Upadhyay, Sanjay Kumar. **Marketing management in small sector manufacturing units in Varanasi.** BHU. Dr B Jha, Department of Commerce, Banaras Hindu University, Varanasi.

Home Science

1. Bhandari, Vandana. **Costume of Rajasthan.** Delhi. Dr Anu Verma, Lecturer, Lady Irwin College, Sikandra Road, New Delhi and Dr Jyotindara Jain, Senior Director, National Handicrafts and Handlooms Museum, Pragati Maidan, Bhairon Road, New Delhi.

2. Gupta, Usha Prasad. **An analysis of nutritional status of children, 0-6 yrsof I C D S projects in tribal areas of South Chhotanagpur.** Bihar. Dr (Mrs) Manorama Ambastha, Prof and Head, Department of Home Science, University of Bihar, Muzaffarpur and Dr Krishnadeo Upadhyay, Reader, Department of Psychology, Ranchi University, Ranchi.

3. Juneja, Ritu. **Prenatal gender selection by parents: Socio cultural and familial correlates.** Delhi. Dr Geeta katarya, Senior Lecturer, Department of Child Development, Lady Irwin College, Sikandra Road, New Delhi.

4. Sekhri, Seema. **A new approach to garment design through schatometric measurements of selected Indian females.** Delhi. Dr Anu Verma, Lecturer, Lady Irwin College, Sikandra Road, New Delhi and Dr Raghbir Signh, Prof, Department of Anthropology, University of Delhi, Delhi.

Management

1. Chandramohanan Asan, G. **Buying behaviour in road transport sector.** Kerala. Dr V Mukunda Das, Prof, Centre for Management Development, University of Kerala, Thycaud, Thiruvananthapuram.

2. Gupta, Deepak. **Evaluation of social responsibilty disclosure practices in Indian companies.** Vikram. Dr Nageshwar Rao, Director, Pt J N Institute of Business Management, Vikram University, Ujjain.

3. Ranjit, C S. **Bank marketing: A framework for developing marketing strategies for bank products in the NRI segment in Kerala.** Kerala. Dr V Mukunda Das, Prof, Centre for Management Development, University of Kerala, Thycaud, Thiruvananthapuram.

HUMANITIES

Philosophy

1. Bajrangi Singh. **Swatantrik madhyamik darshan ka adhyayan.** BHU. Prof B N Singh, Department of Philosophy, Banaras Hindu University, Varanasi.

2. Nihala Singh. **Mahayan Bauddha darshan.** BHU. Prof B N Singh, Department of Philosophy, Banaras Hindu University, Varanasi.

3. Pandey, Rakesh Kumar. **Adwait Vedant tatha Kashmir Shaiv darshan mein jagat ka swaroop: Ek sameekshatmak adhyayan.** BHU. Dr K P Mishra, Department of Philosophy, Banaras Hindu University, Varanasi.

4. Shukla, Shashi. **Swami Karpatriji ka samajik evam rajnaitik darshan.** BHU. Dr Urmila Chaturvedi, Department of Philosophy, Banaras Hindu University, Varanasi.

5. Singh, Jai Shankar. **Purnata pratyabhigyata ka sameekshatmak adhyayan.** BHU. Prof Kamalakar Mishra, Department of Philosophy, Banaras Hindu University, Varanasi.

6. Suman Devi. **Satyartha Prakash ka ek sameekshatmak adhyayan.** BHU. Dr Urmila Chaturvedi, Department of Philosophy, Banaras Hindu University, Varanasi.

7. Tiwary, Shiv Narayan. **Gandhi, Tagore evam Vivekanand ke darshan mein Ishwar: Ek sameekshatmak adhyayan.** BHU. Dr K P Mishra, Department of Philosophy, Banaras Hindu University, Varanasi.

Religion

1. Ibrahim, V A. **The Gulf-Crisis and its socio-political and cultural repurcussions in Kerala: A study.** Kerala. Dr K T Mohamed Ali, Reader and Head, Department of Islamic Studies, University of Kerala, Kariavattom.

Fine Arts

1. Jaiswal, Rumy. **Brahman Devi-Devataon ka aayudh.** BHU. Dr M N P Tiwari, Department of History of Art, Banaras Hindu University, Varanasi.

2. Srivastava, Sudha. **Bharatiya kasidakari: Ek sarvekshan.** BHU. Dr Kalyan Krishna, Department of History of Art, Banaras Hindu University, Varanasi.

Music

1. Pusalkar, Rashmi Prabha. **Vagyekar Padamshri Pt Balvantrai, Gulabrai Bhatt: Vyaktitva, krititva evam sangitik yogdan.** BHU. Dr P K Dixit, Department of Vocal Music, Banaras Hindu University, Varanasi.

2. Singh, Sangeeta. **Rag sangeet ke ananya sewak: Chalchitra sangeet nirdeshak Shri Naushad Ali.** BHU. Dr P K Dixit, Department of Vocal Music, Banaras Hindu University, Varanasi.

Language & Literature

English

1. Banerjee, Samarpita. **Moral visions in the novels of Charlotte Bronte.** BHU. Dr S R Jalote, Department of English, Banaras Hindu University, Varanasi.

2. Kuruvilla, Thomas. **The comic mode in the later novels of Graham Greene.** Kerala. Dr P K Rajan, Reader, Department of English, Institute of Correspondence Courses, University of Kerala, Kariavattom.

3. Sachchida Nand. **Treatment of family in the novels of R K Narayan.** BHU. Dr A K Tripathi, Department of English, Banaras Hindu University, Varanasi.

Sanskrit

1. Mithilesh. **Shlok Vartika: Ek perisheelan.** BHU. Dr J G Ratate, Department of Sanskrit, Banaras Hindu University, Varanasi.

2. Yadava, Subhash Singh. **Atharvaveda ke paushtik sutron ka alochantmak adhyayan.** BHU. Prof V K Varma, Department of Sanskrit, Banaras Hindu University, Varanasi.

Hindi

1. Agrawal, Ritu. **Lok mangal kee avadharna aur Tulsidas.** BHU. Dr S N Pandey, Department of Hindi, Banaras Hindu University, Varanasi.

2. Bhowon, Sunyukta Kumari. **Antah sangharah ka yatharth evam Nirala kee kavya sarjana.** BHU. Dr V Mishra, Department of Hindi, Banaras Hindu University, Varanasi.

3. Chandrabali Singh. **Prasad ke katha sahitya mein nari chetna ka swaroop.** BHU. Dr R S Rai, Department of Hindi, Banaras Hindu University, Varanasi.

4. Ojha, Krishna Kant. **Adunik sameeksha ke ayam.** BHU. Dr N K Varsney, Department of Hindi, Banaras Hindu University, Varanasi.

5. Singh, Roli. **Shyamnarayan Pandey ka kavya: Kathya aur shilpa.** BHU. Dr Asha Pant, Department of Hindi, Banaras Hindu University, Varanasi.

6. Singh, Savita Kumari. **Hindi kee lambi kavitayen: Banavat evam bunavat.** BHU. Dr Vidyotta Mishra, Department of Hindi, Banaras Hindu University, Varanasi.

7. Singh, Taj Bahadur. **Hindi laghu upanyas: Vastu aur shilpa.** BHU. Dr Sudhakar Singh, Department of Hindi, Banaras Hindu University, Varanasi.

8. Sinha, Ravindra Prasad. **Mahabharat ashrit kavyon ka aloch-**

natmak adhyayan, 17vi, 18vi shatabdi. BHU. Dr Asha Pant, Department of Hindi, Banaras Hindu University, Varanasi.

9. Srivastava, Geeta. **Parasi Hindi natak aur rashtriya chetna.** BHU. Dr N Rai, Department of Hindi, Banaras Hindu University, Varanasi.

10. Srivastava, Rashmi. **Madhyayugeen Bharatiya samaj ka sanskritik antarvirodh aur Ramcharit Manas.** BHU. Dr C R Yadav, Department of Hindi, Banaras Hindu University, Varanasi.

11. Srivastava, Shweta. **Bhakti ka samajik sandarbh aur Tulsidas.** BHU. Dr R S Dubey, Department of Hindi, Banaras Hindu University, Varanasi.

12. Varma, Uma Shankar. **Udaishanker Bhatt aur unki natya kala.** BHU. Dr Asha Pant, Department of Hindi, Banaras Hindu University, Varanasi.

Bengali

1. Chakraborty, Rupali. **Rabindranather bhraman sahitya.** BHU. Prof S Das, Department of Bengali, Banaras Hindu University, Varanasi.

Kannada

1. Hiremath Shailaja. **Janapada niruktigalu.** BHU. Prof Shivanand V, Department of Kannada, Banaras Hindu University, Varanasi.

2. Shylaja, C G. **Tumkuru Jileya betta, Gudda, Kanive Namagalu - Ondu mddhyakyana.** BHU. Prof Shivanand V, Department of Kannada, Banaras Hindu University, Varanasi.

Nepali

1. Lama, Kabita. **Bhanu Bhakta ka kavya: Kritiko bhasik adhyayan.** BHU. Dr G S Nepal, Department of Indian Languages, Banaras Hindu University, Varanasi.

History

1. Asmita. **Pracheen Bharat mein rajya aur lok kalyan.** BHU. Dr Mohd Naseem, Department of Ancient Indian History, Culuture and Archaeology, Banaras Hindu University, Varanasi.

2. Shashi Kant. **Uttar Bharat mein-Guptottar kal ke abhilekhon ka lipi shastriya adhyayan, 700 isvi tak.** BHU. Dr Meena Lal, Department of Ancient Indian History, Culuture and Archaeology, Banaras Hindu University, Varanasi.

3. Singh, Archana. **Pracheen Bharatiya rajaon aur dharmik sahishtuna.** BHU. Dr Mohd Naseem, Department of Ancient Indian History, Culuture and Archaeology, Banaras Hindu University, Varanasi.

4. Singh, Sanjay Kumar. **Koomariya kee Jain pratimayen.** BHU. Dr Harihar Singh, Department of Ancient Indian History, Culuture and Archaeology, Banaras Hindu University, Varanasi.

5. Singh, Santosh Kumar. **Bharatiya sahitya, kala evam dharma mein Shitala Devi.** BHU. Prof V C Srivastava, Department of Ancient Indian History, Culuture and Archaeology, Banaras Hindu University, Varanasi.

6. Srivastava, Raj Lakshmi. **Position of women in Smriti.** BHU. Prof Lallanji Gopal, Department of Ancient Indian History, Culuture and Archaeology, Banaras Hindu University, Varanasi and Dr (Mrs) K K Gopal, Department of Ancient Indian History, Culuture and Archaeology, Banaras Hindu University, Varanasi.

7. Sunil Kumar. **Mahabharat mein Krishna ka swaroop.** BHU. Dr (Mrs) S D Singhal, Department of Ancient Indian History, Culuture and Archaeology, Banaras Hindu University, Varanasi.

9. Upadhyay, Dharmendra Kumar. **A study of Gupta coins with particular reference to their boorary of political and cultural history.** BHU. Dr P N Singh, Department of Ancient Indian History, Culuture and Archaeology, Banaras Hindu University, Varanasi.

9. Vijay Shankar. **Pracheen Bharat mein purusharth kee avadharan.** BHU. Dr Meena Lal, Department of Ancient Indian History, Culutureand Archaeology, Banaras Hindu University, Varanasi.

THESES OF THE MONTH

A list of doctoral theses accepted by Indian Universities

SOCIAL SCIENCES

Library & Information Science

1. Rajyalakshmi, Desaraju. **Impact of Ranganathan on AACR.** Nagpur. Dr P S G Kumar, Department of Library and Information Science, Nagpur University, Nagpur.

2. Shukla, Banabihari. **The work and impact of a pioneer in library and information science: A critical study of the works of Prof Pirthiv Nath Kaula. D.Litt.** Utkal.

Psychology

1. Agochiya, Devindra Pal. **A cross-cultural study of personality, values and altruistic behaviour of youth workers.** Panjab.

2. Akhtar, Neelofar. **A study of organizational variables and personal characteristics as correlates of absenteeism.** AMU. Dr Shamim A Ansari, Reader, Department of Psychology, Aligarh Muslim University, Aligarh.

3. Diwale, Sujata Sudhakar. **Multivariate study of androgyny in relation to psychological health and perceived status of women.** Nagpur. Dr B N Mukherjee, Indian Statistical Institute, Calcutta.

4. Nalini, N R. **Cognitive behaviour therapy in the treatment of neurotic depression.** Bangalore. Dr V Kumaraiah, Addl Prof, Department of Clinical Psychology, National Institute of Mental Health and Neuro Sciences, Bangalore.

5. Raja Mouli, C. **Psychological variables of candidates enrolled in open university and conventional university in Andhra Pradesh.** Osmania.

6. Thusoo, Usha. **Stress proneness adjustment and security insecurity level as predictor of work efficiency among school teachers.** Awadhesh. Dr L A Singh, Prof (Retd), Department of Psychology, Awadhesh Pratap Singh University, Rewa.

7. Usha, S. **Behaviour therapy in hysterical neurosis.** Bangalore. Dr H Mishra, Addl Prof, Department of Clinical Psychology, National Institute of Mental Health and Neuro Sciences, Bangalore.

Sociology

1. Chaturvedi, Munindra Mohan. **A sociological study of the dacoits of Chambal Ravines.** Jiwaji.

2. Gayatri Kumari. **Bharat mein apradh evam dand prakriya ka samaj shastriya adhyayan.** Magadh.

3. Mahadevia, Darshini. **Emerging process of residential segregation in metropolitan cities: Case study of Bombay and Madras.** JNU. Prof Amitabh Kundu, Centre for the Study of Regional Development, Jawaharlal Nehru University, New Delhi.

4. Narinder Singh. **Impact of land reforms on absentee land owners in Patiala: A study of the process of change.** Punjabi. Dr Parkash Singh Jammu, Prof, Department of Sociology, Punjabi University, Patiala.

Social Anthropology

1. Hazarika, Rani. **Urbanization and social change: A study in Assamese culture with reference to Guwahati.** Gauhati.

2. Rama Rao, Volipalli. **Schooling among scheduled tribes of Andhra Pradesh: A study on the factors affecting teacher functioning.** Andhra.

Social Work

1. Hamza, Mohammed Ameer. **Psychological correlates of siblings of mentally disabled persons.** Bangalore. Dr R Parthasarathy, Assoc Prof, Department of Psychiatric Social Work, National Institute of Mental Health and Neuro Sciences, Bangalore.

2. Sayed Ameeruddin Kazi. **Psychosocial correlates of neurotic conductand behavioural problems of students: A mental health perspective.** Bangalore. Dr G Nardev, Addl Prof, Department of Psychiatric Social Work, National Institute of Mental Health and Neuro Sciences, Bangalore.

Political Science

1. Bordoloi, Anuva. **District administration: A study of the administration of Sibsagar District in Assam.** Dibrugarh. Dr M N Das, Prof, Department of Political Science, Dibrugarh University, Dibrugarh and Dr A Yasin, Lecturer, Department of Political Science, Dibrugarh University, Dibrugarh.

2. Dev, Nirendra Kumar. **Modernisation of Khasi society: Social and political.** Gauhati. Dr V Rao, Emeritus Prof, Gauhati University, Guwahati.

3. Dilbir Kaur. **Protection of Right to Life under Indian political system.** Punjabi. Dr Dalip Singh, Prof, Department of Political Science, Punjabi University, Patiala.

4. Gadre, Madhavi Anand. **Indo American relation: A study of interaction of a super power and regional big power.** Ravishankar. Dr Kishore R Deshmukh, Asstt Prof, Department of Political Science, Durga College, Raipur.

5. Jaswinder Kumar. **Pak-US relations since 1971.** Punjabi. Prof Manohrma Kohli, Department of Political Science, Punjabi University, Patiala.

6. Johari, Avadh Behari. **Political elite and the process of political modernization: A study in the context of Ganganagar District, Rajasthan.** Rajasthan. Dr B P Srivastava, 7, Jha 26, Jawahar Nagar, Jaipur.

7. Jwabreh, Mohammed Ali Ahamed. **The role of Arab Oil in the foreign policy towards the Middle East, 1967-1981.** Pondicherry. Dr S Gabrriel, Prof, Institute of International Studies, Pondicherry University, Pondicherry.

8. Kataria, Vijay Kumar. **Politico-administrative environment for green revolution: A case study of Panjab, 1956-66.** Panjab.

9. Kuldeep Singh. **Foreign policy of Bangalore towards Indian Sub-Continent, 1975-83.** Punjabi. Dr D N Shukla, Lecturer, Correspondence Courses, Punjabi University, Patiala.

10. Ronki Rami. **US occupation of Japan 1945-52: A study of linkage politics an approach to world peace.** JNU. Mr Sushil Kumar, Centre for International Politics, Organisation and Disarmament, Jawaharlal Nehru University, New Delhi.

11. Sharma, Brajesh Kumar. **The political ideas of Charan Singh: An evaluation.** Bihar. Dr R Pandey, Prof, Department of Political Science, Bihar University, Muzaffarpur.

Economics

1. Antony, M T. **Efficiency in central public sector enterprises in Kerala: An analysis of capacity utilisation profitability and productivity.** CUST. Dr Jose T Payyappilly, Prof, School of Management Studies, Cochin University of Science and Technology, Kochi.

2. Balwan Singh. **Madhya Pradesh ke anusoochit janjati kshetron ka arthik vikas evam gair arthik tatva: Madhya Pradesh ke Pashchimi jilon ke sandarbh mein ek sameekshatmak adhyayan.** Devi Ahilya. Dr M V Kapre, Department of Economics, Devi Ahilya Vishwavidyalaya, Indore.

3. Bhatt, Prabha. **Narsingpur Jile mein krishi upaj vipanan ka adhyayan: Krishi upaj mandiyon ke vishesh sandarbh mein.** HS Gour. Dr P K Patankar, Reader (Retd), Department of Economics, Dr Hari Singh Gour Vishwavidyalaya, Sagar.

4. Bunkar, B L. **Laghu udyogon ke vikas mein Madhya Pradesh Vitt Nigam ka yogdan: Ek arthik vishleshan, Indore Sambhag ke vishesh sandarbh mein.** Devi Ahilya. Dr (Mrs) T K Vajdi, Prof, Department of Economics, Devi Ahilya Vishwavidyalaya, Indore.

5. Dey, Prabal Kumar. **Indo-GDR trade: A perspective.** Rabindra Bharati.

6. Ghoshal, Ratan Kumar. **Dynamics of rural transformation: Some economic aspects, a study of West Bengal, 1950-1986.** Calcutta.

7. Jain, Manorama. **Dakshini Pashchimi Madhya Pradesh ke arthik vikas mein Madhya Pradesh Rajya Sehkari Bank Maryadit ka yogdan.** Devi Ahilya. Dr S S Pawar, Minority Cell, Devi Ahilya Vishwavidyalaya, Indore.

8. Lakshminarayana, S. **Saving behaviour in India with particular reference to household savings.** Osmania.

9. Mishra, Nilan Kumari. **An economic analysis of rehabilitation of rural poor in Orissa: A case study of Dhankanal District.** Ravishankar. Dr J L Bhardwaj, Reader, School of Studies in Economics, Pt Ravishankar Shukla University, Raipur.

10. Paliwal, Geeta Radhakrishna. **Socio-economic status of women engaged in biri industry in Bhandara District: A study.** Nagpur. Dr R K Paliwal, S N Mor College, Tumsar.

11. Pandian, Ponnammai K. **Women labour absenteeism in spinning mills, Salem.** Teresa. Dr Aromy Glory Sam.

12. Ramasamy, G. **Electricity tariffs in India: A comparative study of Tamilnadu Electricity Board with Madhya Pradesh Electricity Board.** Jiwaji. Dr S K Shukla, School of Studies in Economics, Jiwaji University, Gwalior.

13. Ratan, Ratneshwar Prasad Singh. **Women's participation and economic contribution in tribal farming systems.** Rajendra Agrl.

14. Ratnakrishnan, L. **Utilisation of forests and its impact on the economy of Andaman and Nicobar Islands, India.** Pondicherry. Dr M Ramadass, Prof and Head, Department of Economics, Pondicherry University, Pondicherry.

15. Sarkar, Punyabrate. **Determinants of rural-urban migration in West Bengal.** Calcutta.

16. Shaha, Bisheswari. **Impact of the integrated Rural Development Projects on the use of land and labour in Nepal.** NBU.

17. Sharma, Robin Chandra. **The determinents of rural fertility in Assam.** Dibrugarh. Dr H Goswami, Prof, Department of Economics, Dibrugarh University, Dibrugarh.

18. Shrivastava, Asha. **Bharat evam Dakshini Poorvi Asiai deshon ke madhya videshi vyapar ka vishleshan tatha adhyayan, 1951 se 1984 tak.** Jiwaji. Dr (Smt) Asha Sablok, Department of Economics, Madhav Mahavidyalaya, Gwalior.

19. Singh, Rameshwar Nath. **Raipur Sambhag mein janankikiya pravrittiyon ka adhyayan.** Ravishankar. Dr B K Mehta, Asstt Director, Adult Education, Pt Ravishankar Shukla University, Raipur.

20. Sukhwinder Singh. **Development and use of health care services in rural areas: A case study of Panjab.** Punjabi. Dr H K Manmohan Singh, Vice Chancellor, Punjabi University, Patiala.

21. Sundararaj, N. **Tribal development in India with special reference to Tamil Nadu since 1950.** Bharathidasan. Dr K Rajarat-

nam, Director, Centre for Research on New International Economic Order, 1, First Street, Haddows Road, Madras.

22. Tiwari, Sudha. **Sagar Sambhag mein grameen vikas karyakramon ka arthik mulyankarn, varsh 1974-75 se 1984-85 tak.** HS Gour. Prof R Mehrotra, Head, Department of Economics, Dr Hari Singh Gour Vishwavidyalaya, Sagar.

23. Vyas Sushma. **Khadi Gramodyog mein viniyog utpadakta evam rojgar: Ek adhyayan Madhya Pradesh ke vishesh sandarbh mein, varsh 1960-1985.** Devi Ahilya. Dr R P Gupta, 39, Anand Nagar, Bhanwar Kuya Road, Indore.

Law

1. Abrol, Anma. **Uniform Civil Code: Problems and prospects.** Jammu. Dr N R Ganai, Prof, Department of Law, University of Jammu, Jammu.

2. Mishra, Jay Prakash Narayan. **Law relating to capital punishment in India with special reference to International Conventions.** HS Gour. Dr H N Giri, Department of Law, Dr Hari Singh Gour Vishwavidyalaya, Sagar.

Public Administration

1. Gupta, Mohan Lal. **An analytical study of the role and effectiveness of the office of the Divisional Commissioner in the administrative set-up of Panjab.** Punjabi. Dr K K Puri, Department of Public Administration, Punjabi University, Patiala.

2. Tom, Richard Melvin. **Rural development administration: A study in a district in Andhra Pradesh.** Nagpur. Dr S L Dave, Department of Public Administration, Nagpur University, Nagpur.

Military Studies

1. Jade, Sanjay. **Non-alignment and the security of the Afro-Asian Region.** Jiwaji. Dr R N Mishra, C-32, Punjabi University, Patiala.

Education

1. Bharote, Alka Chandrakanta. **Acharya Vinoba Bhave yanche tatvagyan ani tyacha navya shaikshnik dhornachya sandarbhat shikshanvar parinam: Ek adhyayan.** Nagpur. Dr Gouri Shanker Parashar, Department of Education, Nagpur University, Nagpur.

2. Deka, Harichandra. **Elementary education in Assam with special reference to District Darrang: An analytical study.** Gauhati. Dr P C Das, Reader, Department of Education, Gauhati University, Guwahati.

3. Mlanga, Andrew Titus Omolo. **Perceptions of high school teachers, students and educational administrators regarding the principles practices and procedures for curriculum development programmes for high schools in Nairobi, Kenya.** Panjab.

4. Patel, Varshabahen Babalbhai. **A study of attitude of secondary school students towards Sanskrit in relation to their parents' caste, occupation and socio-economic status.** Patel. Dr C K Patel, Principal, Anand Educational College, Anand.

5. Patial, Om Kumari. **A study of selected psychological variables of female Indian hockey players.** Jiwaji. Dr Indu Mazumdar, Lakshmibai National College of Physical Education, Gwalior.

6. Sandhu, Nachhattar Pal Singh. **A study of achievement motivation, socio-economic status, educatonal aspirations and physical performances of high school hockey players and non-players.** Punjabi. Dr S K Kakkar, Principal (Retd), Raghbir Colony, Model Town, Patiala.

7. Sharma, Vijay Kumar. **Analysis of selected anthropometric measurement motor components ad physiological variables as prerequisites to soccer performance.** Jiwaji. Dr Jayant Mukerji, Lakshmibai National College of Physical Education, Gwalior.

8. Sodhi, Anjana. **A comparative study of the organisational set-up pertaining to the transfer of technology and extension training programmes at the agricultural universities in India.** PAU.

9. Surinder Kaur. **An analytical study of the functions and effectiveness of PAU Farm Advisory Service Scheme in Panjab.** PAU.

10. Thakre, Sumedha Sadashiv. **A study of the development of personality among the twins.** Nagpur. Dr G S Parasher, Department of Education, Nagpur University, Nagpur.

11. Vasugi, K. **Constraints on the educational achievement of school going girls.** Teresa. Dr S Lakshmi.

12. Venugopu, S. **Youth festivals and insitutional music climate in schools and colleges of Kerala.** Kerala. Dr N Vedamani Manuel, Director, CERID Mitraniketan, Vellanad, Thriuvavanthapuram.

Commerce

1. Abou Lateef Syed Mohd. **Performance of joint sector enterprises promoted by select SIDCs: A study of objectives, management and financial performance.** Osmania.

2. Ansar Ahmad. **A study of saving and investment pattern with particular reference to economic development in Azamgarh District.** AMU. Dr Mohd Asif Ali Khan, Reader, Department of Commerce, Aligarh Muslim University, Aligarh.

3. Ansari, Mohammad Shoeb. **A study of financial structure of Thermal Units under the NTPC.** AMU. Prof Nafees Baig, Department of Commerce, Aligarh Muslim University, Aligarh.

4. Azhagaiah. **NRI investments inIndia: Problems and perspectives.** Pondicherry. Dr B Murugesan, Reader, Department of Commerce, Pondicherry University, Pondicherry.

5. Bansal, Anup Chand. **Madhya Pradesh ke pichhre jilon ka arthik vikas mein audyogikaran ka yogdan: Dhar Jile ke vishesh sandarbh mein.** Devi Ahilya. Dr D P Mishra, Principal, Vaishnav Commerce College, Indore.

6. Jain, Arvind Kumar. **Urja utpadan ka artha shastra: Madhya Pradesh mein tap evam jal vidyut ka tulnatmak adhyayan.** HS Gour. Dr S B Awasthi, Department of Commerce, Dr Hari Singh Gour Vishwavidyalaya, Sagar.

7. Khasnabis, Ratandhan. **Aspects of agrarian backwardness under semi-feudalism.** Calcutta.

8. Mohammad Yameen. **A study of the working of the U P State Cement Corporation since 1972.** AMU. Prof A Farooq Khan, Department of Commerce, Aligarh Muslim University, Aligarh.

Home Science

1. Krishnabai, G. **Development of women through income generating activity utilising sewing.** Teresa. Dr Rajammal P Devadas, Vice Chancellor, Avinashalingam Institute for Home Science and Higher Education for Women, Coimbatore.

2. Rath, Braja Kishori. **Feeding patterns of infants and pre-school children in industrial urban and rural community of Western Orissa, India.** Sambalpur. Dr A C Parija, Assoc Prof, Department of Padiatrics, S C B Medical College, Cuttack and Prof M C Dash, Post Graduate Department of Life Science, Sambalpur University, Jyoti Vihar, Burla.

Management

1. Kansal, Rajiv. **A comparative study of commercial and cooperative bank manager's effectiveness in relation to intelligence, job-involvement and personality traits.** Punjabi. Dr M S Bedi, Reader, Department of Business Management, Punjabi University, Patiala.

2. Pasricha, Jasmeet Singh. **Bank finance and rural development in Panjab: A case study of lead Bank Scheme.** Punjabi. Prof U C Singh, Department of Business Management, Punjabi University, Patiala and Dr A K Vashisht, Lecturer, Department of Punjabi, Punjabi University, Patiala.

3. Pownikar, Laxmikant Madhukar. **Impact of Ceiling Act on agricultural holdings on production and employment in East Vidarbha Region from 1961 to 1985.** Nagpur. Dr G G Fukey, Principal, Dhanwate National College, Nagpur.

4. Shrivastava, Yogesh Kumar. **Sagar Sambhag mein arthik vikas ka nirdhanta unmoolan per prabhav ka mulyankan: Pratham Yojana se Sattvin Yojana tak.** Awadhesh. Dr V C Sinha, Prof and Head, Department of Business Economics, Avadhesh Pratap Singh University, Rewa.

POSTGRADUATE INSTITUTE OF MEDICAL EDUCATION AND RESEARCH, CHANDIGARH-160012

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Applications, on prescribed form, are invited for the following postgraduate courses etc., for the academic session starting from First January 1993 :-

CLOSING DATE FOR RECEIPT OF APPLICATIONS IS NOVEMBER 4, 1992

1. FIRST YEAR JUNIOR RESIDENTS/JUNIOR DEMONSTRATORS : (for MD/MS courses)
    - a) JUNIOR RESIDENTS (Clinical Group) : 58
      Anaesthesia-10, Dermatology, Venereology & Leprology-2, ENT-3, Medicine-8, Obstt. & Gynae-6, Paediatrics-7 Psychiatry-2, Ophthalmology-2, Orthopaedic Surgery-3, Radio Diagnosis-1, Radiotherapy-2, Surgery-12.
    - b) JUNIOR DEMONSTRATORS (Para Clinical Group) : 13
      Microbiology-6, Pathology-4, Pharmacology-3
    - (i) Those completing their internship after 31.12.1992 are not eligible
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5. M.Sc. Medical Technology (Microbiology) with Bacteriology or Parasitology or Virology as a special subject.
6. M.Sc. Medical Technology (Pharmacology & Physiology).
7. M.Sc. Medical Technology Radiology with Radio-Diagnosis or Radiotherapy as a special subject.

GENERAL INFORMATION

1. For categories I to III candidates who have made more than one attempt (i.e. have more than one failure, compartment or re-appear) during their MBBS/BDS course are not eligible. However, those belonging to Scheduled Castes/Tribes with upto two attempts in their MBBS/BDS career will be eligible.
2. Those applying for the reserved seats must append, with their applications, a certificate from the competent authority, indicated in the brochure of information, in support of their claim. No other certificate will be entertained.
3. For courses at categories III to VIi above, only sponsored/deputed candidates will be considered.
4. The number of seats, wherever indicated, is provisional and is subject to change without prior notice.
5. The application must be accompanied with non refundable fee of Rs. 100/- in the form of postal order/bank draft drawn in favour of the Director of this institute.
    - (i) For category I only one application needs to be submitted and the application fee will be Rs. 100/- only irrespective of the number of subjects for which the candidate may like to be considered.
    - (ii) For other categories those desirous of applying for more than one subject/course are required to submit separate applications for each subject/course complete in all respects.
6. Application form and 'brochure of information' are available from the office of the undersigned either personally on payment of Rs. 20/- at the counter from 10.30 AM to 11.30 AM on all working days and from 2.30 PM to 3.30 PM on all working days (except Saturdays) or by post for which the request must be accompanied with a self addressed envelope size (23x10 cms.) bearing postage stamps of Rs. 4.50 and crossed postal order/bank draft for Rs. 20/- drawn in favour of the Director.

O.P. Sharda
REGISTRAR

Ministry of Defence
DEFENCE RESEARCH AND DEVELOPMENT ORGANISATION (DRDO)

Advt. No. 032/RAC/92

DRDO invites applications for the following posts :-

SCIENTIST 'G' : (Rs. 5900-7300)-2 Posts.

LRDE, Bangalore

Item No. 1: 1 Post-ESSENTIAL QUALIFICATIONS : (i) At least second class Bachelor's degree in Electronics/Communication/Telecommunication/Electrical Communication Engineering from a recognised university or equivalent. (ii) Twelve years of experience in research, design & development in the areas of radar system or communication networks of which 5 years should have been in a responsible senior position handling major R&D project.

DESIRABLE QUALIFICATIONS: (a) Master's or Doctorate degree in any of the areas indicated above. (b) Proven record of technical/managerial experience by way of leading a group/laboratory, of successful completion of projects and of publication of reports/papers in reputed journals in relevant area indicated above. (c) Knowledge of French or German or Russian.

Job Description : The scientist is required to provide scientific leadership in the areas of design and development of Radar and Communication systems which encompasses antenna and microwaves signal and data processing, communication networks, C^{3}I and software. The scientist is also required to lead and guide a team of scientists involved in multidisciplinary fields of electronics and engineering leading to integration of sophisticated electronic systems on Radars and Communication and to interact creatively with other R&D Labs, academic institutions and production agencies.

DLRL, Hyderabad

Item No. 2 : 1 Post-ESSENTIAL QUALIFICATIONS : (i) At least second class Bachelor's degree in Electronics/Communication/Telecommunication/Electrical Communication Engineering from a recognised university or equivalent. (ii) Twelve years of experience in research, design and development of electronic systems of which 5 years should have been in a responsible senior position handling major R&D projects.

DESIRABLE QUALIFICATIONS : (a) Master's or Doctorate degree in any of the areas indicated above. (b) Proven record of technical/managerial leadership by way of leading a group/laboratory, of successful completion of projects and of publication of reports/papers in reputed journals in relevant area indicated above. (c) Knowledge of French or German or Russian.

Job Description : The scientist is required to provide scientific leadership in the areas of design and development of Electronic systems which encompasses antenna and microwave components, signal processing and signature analysis. The scientist is also require to lead and guide a team of scientists involved in multi-disciplinary fields of electronic and engineering leading to integration of sophisticated electronics equipment and to interact creatively with other R&D labs, academic institutions and production agencies.

SCIENTIST 'C': (Rs. 3000-4500)-2 Posts.

Aeronautics Development Establishment, Bangalore

Item No. 3 : 1 Post-ESSENTIAL QUALIFICATIONS : (i) At least second class Bachelor's degree in Mechanical Engineering from a recognised university or equivalent. (ii) Four years research, design and development experience in the field of Aeronautical Engineering.

DESIRABLE QUALIFICATIONS : (i) ME/M.Tech/Ph.D in Aeronautical Engineering. (ii) Experience in the field of Aeronautical Structural design and analysis.

Solidstate Physics Laboratory, Delhi

Item No. 4 -1 Post. ESSENTIAL QUALIFICATIONS: (i) At least second class Master's degree in Physics from a recognised university or equivalent. (ii) Four years research and development experience in the area of Molecular Beam Epitaxy (MBE) or Semiconductor films for quantum well and super lattice based devices.

DESIRABLE QUALIFICATIONS : (i) Ph.D in Physics. (ii) Knowledge of characterizing the semiconductor films using electrical and optical techniques.

SCIENTIST 'B': (Rs. 2200-4000)-19 Posts (UR-2, SC-4, ST-10, SC/ST-3).

Resident Technical Office (Engine), Sunabeda-3 Posts (UR-2, SC-1)

Item No. 5 : 1 Post (UR)-ESSENTIAL QUALIFICATIONS : At least second class Bachelor's degree in Mechanical Engineering from a recognised university or equivalent.

DESIRABLE QUALIFICATIONS : (i) M.Tech degree in Mechanical Engineering (ii) Experience on airworthiness of aero engine.

Item No. 6 : 1 Post (SC)-ESSENTIAL QUALIFICATIONS: At least second class Bachelor's degree in Aeronautical Engineering from a recognised university or equivalent.

DESIRABLE QUALIFICATIONS : (i) M.TEch degree in Mechnaical Engineering (ii) Experience on airworthiness of aero engine.

Item No. 7 : 1 Post (UR)-ESSENTIAL QUALIFICATIONS : At least second class Bachelor's degree in Metallurgical Engineering from a recognised university or equivalent.

DESIRABLE QUALIFICATIONS: M.Tech degree in Metallurgical Engineering.

THE FOLLOWING POSTS ARE BEING ADVERTISED FOR THE SIXTH TIME SO AS TO FILL UP RESERVED POSTS OUT OF CANDIDATES BELONGING TO SCHEDULED CASTE AND SCHEDULED TRIBE COMMUNITIES.

Item No. 8 : 1 Post (SC/ST)-ESSENTIAL QUALIFICATIONS : At least second class Bachelor's degree in Rubber Technology from a recognised university or equivalent.

DESIRABLE QUALIFICATIONS: Master's degree in Rubber Technology.

Item No. 9: 1 Post (SC/ST)-ESSENTIAL QUALIFICATIONS : At least second class Bachelor's degree in Fire Engineering from a recognised university or equivalent.

DESIRABLE QUALIFICATIONS : Master's degree in Fire Engineering or experience in fire research.

Item No. 10 : 1 Post (ST/SC)-ESSENTIAL QUALIFICATIONS : At least second class Bachelor's degree in Paint Technology from a recognised university or equivalent.

DESIRABLE QUALIFICATIONS : Master's degree in Paint Technology.

THE FOLLOWING POSTS ARE BEING ADVERTISED FOR THE FIFTH TIME SO AS TO FILL UP RESERVED POSTS OUT OF CANDIDATES BELONGING TO SCHEDULED TRIBE COMMUNITY.

Item No. 11 : 4 Posts (ST-4)-ESSENTIAL QUALIFICATIONS : At least second class Bachelor's degree in Electronics Engineering from a recognised university or equivalent.

DESIRABLE QUALIFICATIONS : Master's degree in Electronics Engineering with specialisation in Computer Networks/Microprocessors/Digital Communication/Sensors/Monitoring devices/Microwaves.

THE FOLLOWING POSTS ARE BEING ADVERTISED FOR THE THIRD TIME SO AS TO FILL UP RESERVED POSTS OUT OF CANDIDATES BELONGING TO SCHEDULED CASTE AND SCHEDULED TRIBE COMMUNITIES.

Items No. 12 : 2 Posts (ST-2)-ESSENTIAL QUALIFICATIONS : At least second class Bachelor's degree in Electronics Engineering from a recognised university or equivalent.

DESIRABLE QUALIFICATIONS : Master's degree in Microwave/Advanced Electronics Engineering.

Item No. 13 : 1 Post (SC)-ESSENTIAL QUALIFICATIONS : (i) At least second class Master's degree in Science subject. (ii) Advanced Diploma or degree in French/Chinese language from a recognised university or equivalent.

DESIRABLE QUALIFICATIONS : Flair for interpretation of French/Chinese language into English or vice versa.

Item No. 14: 1 Post (ST)-ESSENTIAL QUALIFICATIONS : A least second class Bachelor's degree in Naval Architecture from a recognised university or equivalent.

DESIRABLE QUALIFICATIONS : Master's degree in Naval Architecture.

Item No. 15: 1 Post (SC-1)-ESSENTIAL QUALIFICATIONS : At least second class Master's degree in Pure/Applied Physics (Non-Electronics) or Meteorology (weather forecasting) from a recognised university or equivalent.

DESIRABLE QUALIFICATIONS : Experience in Numerical Weather Forecast Modelling.

Item No. 16 : 2 Posts (ST)- ESSENTIAL QUALIFICATIONS : At least second class Bachelor's degree in Aeronautical Engineering from a recognised university or equivalent.

DESIRABLE QUALIFICATIONS : (i) Master's degree in Aeronautical Engineering with specialisation in propulsion or Flight Mechanics/Aerodynamics. (ii) Working knowledge of computers and programming languages.

Item No. 17 : 1 Post (ST)-ESSENTIAL QUALIFICATIONS : At least second class Master's degree in Psychology with specialisation in Clinical/Communication/Social/Experimental Psychology from a recognised university or equivalent.

DESIRABLE QUALIFICATIONS : (i) Ph.D degree in Psychology. (ii) Flair for writing audio-visual entertainment scripts.

THE FOLLOWING POST IS BEING ADVERTISED FOR THE SECOND TIME SO AS TO FILL UP RESERVED POSTS OUT OF CANDIDATES BELONGING TO SCHEDULED CASTE AND SCHEDULED TRIBE COMMUNITIES.

Item No. 18 : 1 Post (SC)-ESSENTIAL QUALIFICATIONS : At least second class Master's degree in Veterinary Science from a recognised university or equivalent.

DESIRABLE QUALIFICATIONS : Ph.D degree in animal genetics/animal breeding .(ii) R&D experience in up-keep and maintenance of animal house for rodents and primates.

AWARD OF RESEARCH ASSOCIATES, SENIOR/JUNIOR RESEARCH FELLOWSHIPS

Research Associate

Item No. 19: 1 Post-ESSENTIAL QUALIFICATIONS : Ph.D degree in Life Sciences with specialisation in Cytogenetics from a recognised university or equivalent.

DESIRABLE QUALIFICATIONS : Research experience in Cytogenetics.

Senior Research Fellow

Item No. 20 : 1 Post-ESSENTIAL QUALIFICATIONS : Second Class Master's degree in Agriculture (Horticulture/Agronomy) from a recognised university or equivalent and NET/GATE qualified or otherwise with two year research experience after Master's degree as evidenced by published papers in Standard Journals or PHD in the relevant subject or equivalent.

Item No. 21 : 1 Post-ESSENTIAL QUALIFICATIONS : Second Class Master's degree in Veterinary Science (Poultry/Animal Husbandary) from a recognised university or equivalent and NET/GATE qualified or otherwise with two year research experience after Master's degree as evidenced by published papers in Standard Journals or PHD in the relevant subject or equivalent.

Junior Research Fellow

Item No. 22: 1 Post-ESSENTIAL QUALIFICATIONS : (i) Second Class Master's degree in Physical Chemistry or an equivalent degree from a recognised university or Institution. (ii) NET/GATE qualified.

DESIRABLE QUALIFICATIONS : Research experience in the field of Theoretical Bio-chemistry.

Item No. 23 : 1 Post-ESSENTIAL QUALIFICATIONS : Second Class Master's degree in Agriculture (Horticulture/Agronomy) or equivalent degree from a recognised university or Institution. (ii) NET/GATE qualified.

Item No. 24 : 1 Post-ESSENTIAL QUALIFICATIONS : Second Class Master's degree in Veterinary Science (Poultry/Animal Husbandary) from a recognised university or Institution. (ii) NET/GATE qualified.

NB : (For JRF only) – Candidates whose subjects are not covered by NET/GATE and those without passing NET/GATE can also be considered for Interview.

GENERAL CONDITIONS

1. Promotion Prospects : DRDO offers excellent opportunities for career advancement as Scientists. Result-oriented motivated scientists can look forward to promotions to following grades of scientists:

(i) Scientist 'C': Rs. 3000-4500, (ii) Scientist 'D': Rs. 3700-5000. (iii) Scientist 'E' Rs. 4500-5700, (iv) Scientist 'F': Rs. 5100-6300, (v) Scientist 'G': Rs. 5900-7300.

2. Higher starting salary may be granted to the candidates whose performance is exceptionally brilliant in the interview.

3. Age Limits : (i) For Scientist 'B': Not exceeding 28 years'. (ii) For Scientist 'C' not exceeding 35 years'. (iii) For Scientist 'G' not exceeding 50 years'. Age is relaxable by 5 years in case of Govt. servants and those belonging to Scheduled Caste and Scheduled Tribes communities. Crucial date for determining age is 31 Oct 1992.

4. Method of applying : Neatly typewritten applications should be sent to **Director, Recruitment & Assessment Centre, Lucknow Road, Timarpur. Delhi-110054** preferably by registered cover, superscribed "Applications for the post of Scientists "______________" Item No. "___________" on plain paper in the prescribed format (reproduced below) accompanied by a crossed non-refundable Postal Order of the value of Rs. 8/- drawn in favour of Senior Accounts Officer, Recruit-

ment & Assessment Centre, DRDO, Payable at New Delhi. There is no fee for SC/ST candidates. **Last date** of receipt of applications is 31 Oct 1992. In respect of candidates from Andaman & Nicobar Islands, Lakshadweep and abroad, **last date** of receipt of applications is 14 Nov 1992.

5. Method of Selection : A written test may be conducted for certain posts at selected places. No TA/DA would be admissible for this purpose. Persons called for interview would be reimbursed actual train/bus fare by shortest route limited to second class rail fare (Ist class rail fare for Scientist 'G' posts) from the normal place of residence to the place of interview.

6. Only Indian nationals need apply.

7. Candidates should send applications on the plain paper in the format given below duly typed accompanied with two self-addressed unstamped envelops.

8. One copy of recent passport size photograph should be pasted on right hand corner of the first page of the application.

9. Attested copies of certificates/testimonials should be attached to the application form. Self attested copies will be accepted. NO ORIGINALS SHOULD BE FORWARDED.

10. Candidates will have to produce original certificates at the time of interview.

11. Incomplete applications or those received late will be rejected and no correspondence would be entertained in the regard.

12. The prescribed Essential Qualifications are the bare minimum and the mere possession of the same does not entitle candidates to be called for interview. Where the number of applications received in response to an advertisement is large and it will not be convenient or possible for the Recruitment & Assessment Centre (RAC) to interview all these candidates, the RAC may restrict the number of candidates for interview to a reasonable limit on the basis of qualifications and experience higher than the minimum prescribed in the advertisement or by holding a screening test.

13. **Candidates working in Government/Public Sector Undertakings/ Autonomous Organisations must apply through proper channel. They shall not be interviewed if they fail to produce a 'No Objection' Certificate from their employer at the time of interview.**

14. Candidates desirous of applying for more than one post may apply separately for posts indicating item No. of the posts.

15. Candidates on appointment will have the opportunity to carry out Ph.D with external registration and may be sponsored for doing M.Tech.

16. Opportunities are also available for study leave for carrying out higher studies abroad.

17. DRDS Officers may be sponsored for training abroad.

18. Though initial place of posting is indicated against some of the posts, yet candidates have the liability to serve anywhere in India.

19. Handwritten applications will not be entertained.

20. Number of posts against each item is tentative and may vary.

21. All extra sheets used by the candidates MUST be duly authenticated by them.

22. Knowledge of French, German, Russian, Japanese and Chinese is a desirable qualification for all posts.

23. **Concessions admissible to employees of Snow & Avalanche Study Establishment while serving in field area near Manali.**

(i) Free ration at the scale as admissible to service personnel of equivalent status.

(ii) Free furnished single living accommodation as admissible to service personnel of equivalent status.

(iii) Winter clothing on loan as per the scale laid down.

(iv) Free medical treatment.

(v) Avalanche pay @ Rs. 250/- p.m. for the duration of deployment in avalanche prone area w.e.f 01st Nov. to 30th April.

24. CANVASSING IN ANY FORM WILL MEAN DISQUALIFICATION.

SPECIAL CONDITIONS FOR RESEARCH ASSOCIATE SENIOR/JUNIOR RESEARCH FELLOWS

1. STIPEND

	Ist & 2nd year	3rd year
(a) Junior Research Fellow (JRF)	Rs. 1800	Rs. 2100
(b) Senior Research Fellow (SRF)	Rs. 2100	Rs. 2100

(c) Research Associate : Depending upon qualifications and experience Consolidated emoluments will be payable as under the following two slabs (i) Rs. 2200-100-2700 (ii) 3700-125-4325.

2. AGE : The upper age limit for Research Associate, Senior Research Fellowship and Junior Research Fellowship will be 35 years, 32 years and 28 years respectively. Age will be reckoned on 31 Oct 1992. The upper age limit will be relaxable upto 5 years in case of candidates belonging to Scheduled Castes/Tribes.

3. CONTINGENT GRANT : An amount of Rs. 1000/- per annum will be provided as a contingent grant for each of the persons from all the three categories.

4. DA and CCA
5. BONUS AND LTC — Not admissible
6. RETIREMENT BENEFITS

7. HRA and MEDICAL BENEFITS : HRA and medical benefits as allowed to other DRDO employees may be admissible. For this purpose, the fellowship amount for each of these categories will be taken as Basic Pay.

8. LEAVE AND OTHER SERVICE BENEFITS : JRFs and SRFs will be entitled to only casual leaves while RA may be granted other leaves as per rules. However, maternity leave may be given to women fellow under all categories.

PROFORMA APPLICATION (Use A-4 size of paper)

Application for the post of Scientist/RA/SRF/JRF------------------
Item No. ------------------------------* (To be indicated)

Affix Passport size latest Photograph

1. Advertisement No.
2. Item No.
3. Details of Postal Order(s) No. Date and Amount
4. Name in full (Shri/Smt/Km)
   (in block letters)
5. (a) Date of Birth (in Christian era in figures)
   (b) Age as on 31 Oct 1992
6. Nationality
7. Marital Status
8. Father's/Husband's Name
9. Address for correspondence
10. Permanent Address (in block letters with pin code)
11. Nearest Railway Station
12. Whether belong to SC/ST (if yes, attach certificate)
13. Educational Qualifications

Sr. No	*Exam Passed	University/ Institution/ Board	Year of Passing	Subjects taken	Percentage of Marks	Division

* In choronological order from X Standard (SSLC/HS/HSC) onwards

14. Have you qualified NET/GATE Examination Yes/No
   (a) If yes, please indicate
      (i) Title of the degree
      (ii) University
      (iii) Date of Registration

If no please indicate where you propose to register for a higher degree.

15. Professional Training

Organisation	Period		Details of Training
	From	To	

16. Employment Record

Name & address of employer	Period of service From To	Designation of the post held/ Name of Estt.	Scale of pay of each post	Detailed description of *work	Reason for leaving

* Attach separate signed sheet(s), if necessary.

17. Present Basic Pay

Total emoluments
Salary expected

18. (a) Are you a Central/State Govt Servant?

(b) If not, whether an employee of public sector undertaking/ autonomupis body/Private body

19. Minimum joining time required

20. Resume of research work/experience, if any (Attach separate signed sheet(s), if necessary

21. No. of papers published (Give details in separate signed sheet(s)

22. Field of special interest

23. Are you under any contractual obligations to serve Central/State Govt/Any other public sector undertaking or Autonomous body and if so, give details.

24. Details of relatives already employed in DRDO

Name of Relatives	Relationship	Lab/Estt. in which employed	Post Held

25. Have you applied for any post in DRDO during the past two years? If yes, give particulars :

Sr. No	No. and Date of Advt	Name of Post Discipline	Date of Interview	Remarks

26. Any other information you may wish to add (use separate sheet if necessary).

27. **Declaration :**

I declare that the foregoing information is correct and complete to the best of my knowledge and belief and nothing has been concealed/distorted. If at any time, I am found to have concealed/distorted any material information, my appointment shall be liable to summary termination without notice. I will, if and when required, take up duty in discharge of government assignments anywhere in India.

Place : **Signature of Candidate**
Date

davp 92/316

NEW INDIAN BOOKS RELEASED DURING 21-27 AUGUST

HISTORY: ECONOMIC	
Credit System in Early Medieval India (C. 650 A.D. - 1200 A.D.)/*Arbind Kumar*	130
Trading Communities in Ancient India from Earliest Times to 300 A.D./*Arun Kumar Mishra*	150
HISTORY: INDOLOGY	
India in the Age of the Pancatantra/ *Apurba Chandra Barthakuria*	235
HISTORY: MODERN	
The Soviets and the Indian Revolutionary Movement 1917-1929 (Foreword by Devendra Kaushik)/ *Ashok Kumar Patnaik*	165
HISTORY: POLITICAL	
Imperial Retreat/*S.B. Singh*	210
The Rajiv Gandhi Years: Sunshine and Shadows/ *Philippe Humbert*	225
INTERNATIONAL RELATIONS	
China Japan and India's Foreign Policy Internat. Relations & Foreign Policy of India-3/*Verinder Grover (Ed.)*	700
Introduction to International Relations and India's Foreign Policy Internat. Relations & Foreign Policy of India-1/ *Verinder Grover (Ed.)*	725
LAW	
Legal System in India/*S.R. Bhansali*	(Set) 700
LIBRARY SCIENCE	
Colon Classification: A Select Bibliography/ *Sewa Singh & Sukhbir Singh*	125
Colon Thesaurus of Social Science Terms/ *Jitendra Varma*	220
The Growth of Academic Library System/*B.D. Panda*	300
S.R. Ranganathan 1892-1972 (Introduction by M.P. Satija)/ *Edward Dudley (Ed.)*	75
Towards A Special Library System/*B.D. Panda*	200
LITERATURE	
Malcolm Lowry: Novelist/*Ravindra Prasad Singh*	200
Myth and Mythical Concept in O'Neill's Plays/*D.K. Lal*	175
Robert Lynd Son of Eire/*Mihir Kumar Sen*	225
Sociology of Literature: A Study of Urdu Novels/ *Syed Fazle Rab*	225
LITERATURE: FICTION	
Anandi Gopal (Translated & Abridged from the Marathi by Asha Damle) (Introduction by Suma Chitnis)/ *S.J. Joshi*	(P.B.) 85
MEDICAL: ALLOPATHIC	
V.S. Palekar's Clinical Diagnosis for Medical Undergraduates/*Shaila Palekar*	(P.B.) 57
PERFORMING ARTS: FILM/PLAY SCRIPT	
Awara/*Gayatri Chatterjee*	(P.B.) 95
PHILOSOPHY	
Tolerance in Indian Culture/ *R. Balasubramanian (Ed.)*	(P.B.) 60
PHYSICS	
Gravitation and Cosmology: Proceedings of XV IAGRC Conference Held at the North Bengal University Nov. 4-7, 1989/*S. Mukherjee & Others (Ed.)*	300
POLICE AND CRIMINAL	
Criminology: A Psychological and Anthropological Analysis/ *S.S. Phulia & Others*	325
Policing a District/*Jaytilak Guha Roy (Ed.)*	200
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Liberty and Social Transformation (A Study in Bertrand Russell's Political Thought)/*Chandrakala*	195
Peasant Base of Indian Democracy/*Jai Prakash Sharma*	250
The Politics of Regionalism in South Asia/*B. Mohanan*	150
Radical Humanism: The Philosophy of Freedom and Democracy (2nd Revised & Enlarged Edition)/ *V.M. Tarkunde*	200
PUBLIC HEALTH	
Heart Attacks: How to Recognise How to Manage/ *Natoobhai J. Shah & Sailesh N. Shah*	(P.B.) 65
REFERENCE: BIOGRAPHIES	
President Dr. Shankar Dayal Sharma: Patriot, Scholar, Statesman/*K.L. Chanchreek & Saroj Prasad*	275
REFERENCE: DIRECTORY	
Directory of Government Libraries and Pay Scales/ *M.K. Jain*	250
REFERENCE: ENCYCLOPAEDIAS	
Encyclopaedia of Teaching Languages in India in 35 Vols./ *Sita Ram Sharma*	(Set) 17,000
REFERENCE: GAZETTEERS	
Gazetteer of the Simla District 1988-89/	125
REFERENCE: HAND BOOK	
Cost Reduction Handbook/*P. Gopalakrishnan*	650
RELIGION: BUDDHISM	
The Buddhist Forum Seminar Papers 1988-90 Vol. 2/ *Tadeusz Skorupski (Ed.)*	295
Theravada Buddhist Ethics with Special Reference to Visuddhimagga/*Vyanjana*	275
RELIGION: ISLAMISM	
The Quran and the Contemporary Challenges (Edited by Syed Fazle Rab)/*S.M. Ismail*	125
RELIGION: SIKHISM	
History of Sikh Struggles Vol. IV/*Gurmit Singh*	400
RURAL STUDIES	
Resources and Planning for Economic Development: A Case Study of Sagar Division, M.P./*Archana Bhargava*	250
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Beyond Mandal and After (Backward Classes in Perspective)/ *B.K. Roy Burman*	165
Polluting Sacred Faith: A Study on Communalism and Violence in India/*Pramod Kumar*	230 (P.B.) 95
Psycho-Social Aspects of Aging in India/ *Paramjeet Kaur Dhillon*	400
The Roots of Privacy: Understanding Private and Public Behaviour/*Keshav Dev Sharma*	300
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Glimpses of Rajasthan (Off the Beaten Track)/ *Daulat Singh Rajawat*	160
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Yoga for Rejuvenation: Revitalizing Techniques of the Yogis (Illustrated by Ian Jones)/*Nergis Dalal*	(P.B.) 50

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CLASSIFIED ADVERTISEMENTS

GULBARGA UNIVERSITY, GULBARGA

Administrative Office "Jnana Ganga"

No. GUG/ADM-I/92-93/2637Date 14th Sept. 1992.

NOTIFICATION

Sub:- Application for appointment to the Teaching and Non-Teaching posts for Master of Computer Application Department.

Applications in the prescribed form in Eight Sets are invited from qualified candidates of Indian Nationality for the following Teaching/Non-Teaching posts in Computer Application Department of Gulbarga University, Gulbarga. The applications together with necessary documents should reach the Registrar, Gulbarga University, Gulbarga-585 106 by Registered Post on or before **23.10.1992.**

The details of posts are as under :-

Sl. No.	Name of the posts Scale of Pay	No. of posts	Remarks
1.	PROFESSOR (4500-150-5700-200-7300)	One	GM
2.	READER (3700-125-4700-150-5700)	Two	SC-1 ST-1
3.	LECTURER (2200-75-2800-100-4000)	Three	SC-1 ST-1 GM-1
4.	PROGRAMME ASST. (1900-50-2300-75-2900-90-3350-100-3650)	One	GM
5.	SYSTEMS ANALYST (2200-75-2800-100-4000)	One	GM

GENERAL INSTRUCTIONS :-

1) The candidates selected are liable for transfer to P.G.Centre, Krishnadevaraya Nagar, Sandur, Dist. Bellary.

2) The prescribed application forms together with a copy of detailed advertisement containing details of qualifications prescribed etc., can be had from the Registrar, Gulbarga University, Gulbarga-585 106 on production of Bank Challan for having paid Rs. 50/-, Rs. 25/- in case of SC/ST candidates, towards application fee in the State Bank of Hyderabad, University Campus Branch (Out station candidates desirous of obtaining application forms by post should send D.D. of requisite fee drawn in favour of Gulbarga University, Gulbarga with a requisition and self addressed cover measuring 25 cms x 15 cms duly affixing postal stamps of Rs. 6.00).

REGISTRAR

PUNJABI UNIVERSITY PATIALA

Advt. No.82/PRO/Rect. Ist October, 1992

Applications on prescribed form are invited for the following posts so as to reach the Deputy Registrar (Establishment) by **28 October, 1992 :**

1. LIBRARIAN - 1

4500-7300 (UGC)

Qualification : As laid down by the U.G.C

2. READERS : Computer Science (Damdama Sahib)-1; Business Management (Damdama Sahib)-2; Commerce (CC)-1; Botany-1 Computer Science and Application-2

SPECIALIZATION :

Computer Science : (Damdama Sahib)	Data Base Management
Business Mgt. : (Damdama Sahib)	Marketing/Production/ PersonnelManagement/ Quantitative Techniques.
Commerce (CC) :	Accounting/Finance/ Business Laws.
Botany :	Cytogenetics (Preference will be given to persons with field experience).
Computer Science : & Application	Artificial Intelligence, Theoretical Computer Science, Computer Graphics Analysis of Algorithms, Data Base Management Systems(DBMS), Computer Networks, Operating Systems, System Programming.

3. LECTURERS: Sanskrit-1, Islamic Studies-1, Computer Science & Application-1.

SPECIALIZATION

Sanskrit :	Veda
Islamic Studies	M.A Religious Studies/ Arabic/Islamia (Islamic Studies) with Fazit-e-Mashraqiat and Ph.D. in the area of Islamic Studies.

4. RESEARCH ASSOCIATES : Sports Science-1; Zoology-1

Emolument Slabs : 2200-2700, 2700-3200, 3200-3700, 3700-4325

AGRICULTURAL SCIENTISTS RECRUITMENT BOARD
KRISHI ANUSANDHAN BHAVAN
PUSA, NEW DELHI-110012

CORRIGENDUM

In respect of the post of Director, Indian Lac Research Institute, Ranchi appearing at S.No. 9 of Advertisement No. 2/91, of ASRB which was published in Employment News etc. on 3.8.91, the Essential Qualification No. (v) may now be read as under in place of the qualification already published in the advertisement.

> "Experience in working on 'RESINS' with specialization in Organic, Physical or Polymer Chemistry."

Other contents remain unchanged. The last date for receipt of applications in ASRB in respect of the above post is extended upto **2-11-1992.** Persons who have already applied in response to advertisement No. 2/91, **need not apply again.**

SUKH PAL
UNDER SECRETARY (R)

davp 1020(4)92

Candidates could be considered for placement in any of the slabs depending upon their experience as laid down by the Syndicate.

Age limit : Below 45 years, in the case of women-55 years.

Duration : Three years extendable by another two years.

Qualifications: Candidates who have doctorate degree and published work to their credit and have already shown evidence of independent research work are eligible.

Specializations/Desirable Qualifications:

Sports Science : M.Sc., Ph.D. in Biophysics/Home Science (Child Development/Food & Nutrition). Two years teaching/research experience.

Zoology : Research work in Entomology/Parasitology/Animal Physiology/Cytogenetics.

NOTE :

1. These posts carry UGC pay scales. Only specializations/desirable qualifications have been given in this advertisement. Detailed qualifications as prescribed by the UGC/Syndicate will be supplied along with the application form.
2. Candidates must have passed Punjabi in Matriculation Examination or passed Punjabi Prabodh or Punjabi Praveshika examination. However, if suitable candidates with requisite qualifications in Punjabi are not available, the selected candidates shall have to pass any of these examinations within two years.
3. Incomplete applications and those received after the last date shall not be entertained.
4. Candidates who have already applied for any of the above posts, need not apply again.
5. The eligibility of every candidate will be determined on the basis of qualifications acquired by him up to the last date fixed for receipt of applications.
6. It is not obligatory to call every candidate for interview who possesses the essential qualifications.
7. APPLICATION FORMS can be obtained from the Head, Publication Bureau, Punjabi University, Patiala 147002 on payment of Rs. 15/- at the counter OR by sending a Demand Draft for Rs. 15/- in favour of the Registrar, alongwith a self-addressed envelope (25 x 10 cms.) affixed with postage stamps worth Rs. 10/- and indicating on it the name of the post applied for.

REGISTRAR

NIZAM'S INSTITUTE OF MEDICAL SCIENCES (A UNIVERSITY ESTABLISHED UNDER THE STATE ACT)

PUNJAGUTTA,
HYDERABAD 500482

EMPLOYMENT NOTIFICATION

Applications are invited for the follwing posts.

FACULTY

1. Associate Professor in Neurosurgery (Rs. 4100-125-4850-150-5300 + NPA)
2. Assistant Professor in Bio-Chemistry (Rs. 3500-125-4500)
3. Assistant Professor (Non-Medical) In Radiological Physics (Rs. 3500-125-4500)

RESIDENTS

Senior Residents In

Neurology; Emergency Medicine; Radiology; Pathology; Orthopaedics; Urology; General Surgery; Neruosurgery; Bio-Chemistry and Radiation Oncology.

Note : The posts under the faculty will be fullfilled up at lower level, if qualified candidates are not forthcoming, upper age limit is 35 years for Residents and 50 years for Faculty.

Prescribed application form and details of qualification and experience required for each post can be had by sending a Demand Draft for Rs. 100/- obtained in favour of the Director, Nizam's Institute of Medical Sciences, alongwith a self addressed stamped envelope of Rs. 9/- by paying cash in person. The Institute reserves the right either to fill up or not to fill up any of the posts advertised and also decrease or increase the number of posts advertised at the time of Actual Selection. Last date for receitpt of applications duly filled is **26.10.1992.**

Dr D. Raja Reddy

DIRECTOR

AGRICULTURAL SCIENTISTS RECRUITMENT BOARD

KRISHI ANUSANDHAN BHAVAN
PUSA, NEW DELHI-110012

CORRIGENDUM

Important note No. (ii) given under ASRB's Advertisement No. 1/92 published in Employment News etc. on 15.2.92 will also be applicable in respect of the post of Project Coordinator (Procese Engineering), Indian Institute of Sugarcane Research, Lucknow, appearing at S.No. 9 of the Advertisement No. 1/92. Other contents of the advertisement remain unchanged.

The last date of receipt of applications in ASRB in respect of the post of Project Coordinator (Procese Engineering), I.I.S.R., Lucknow is extended upto **2-11-1992.** Those, who have already applied, need not apply again

davp 1020(3)92

SCHOOL OF CORRESPONDENCE COURSES
ANDHRA UNIVERSITY : WALTAIR

ENTRANCE EXAMINATION NOTIFICATION - DECEMBER, 1992

ENTRANCE EXAMINATION UNDER MODIFIED SCHEME FOR LIBERALISED ADMISSION B.A./B.COM. COURSES WITHOUT ANY FORMAL ACADEMIC QUALIFICATION

Applications are invited from the candidates residing in India for Entrance Examination for admission into 1st year B.A./B.Com. Degree Course for the academic year 1992-93 through the School of Correspondence Courses.

No minimum qualification is required to appear for Entrance Examination, except that CANDIDATES SHOULD HAVE COMPLETED 20 YEARS OF AGE BY 1-1-1993. Candidates who pass the Entrance Examination are eligible for admission into 1st year B.A./B.Com Courses in the School of Correspondence Courses only.

Applications will be issued from 23rd October, 1992. Duly filled-in applications should reach this office on or before 11-11-1992. Applications received after the due date of 11-11-1992 will be accepted on payment of the penal fee at the following rates :

Upto 16-11-1992 (for first five days) ...Rs. 10/-

Upto 20-11-1992 (between sixth and tenth day) ...Rs. 50/-

Applications received after 20-11-1992 will not be accepted even with maximum penal fee.

Date of B.A. and B.Com. Entrance Examination is 20-12-1992

Under Modified Scheme of Entrance Examination, there will be four papers of one hour duration each and the examination will be conducted in two sessions on **SUNDAY the 20th December, 1992 from 9.00 a.m. to 11.00 a.m. and from 2.00 p.m. to 4.00 p.m**. Examination will be conducted in one centre in each district in Andhra Pradesh besides the existing centres in the jurisdiction of Andhra and Nagarjuna Universities.

Intending candidates may write to the undersigned by DESIGNATION for application form, syllabus and model question papers by sending Rs. 20/- by Demand Draft, drawn in favour of the Director, School of Correspondence Courses, Andhra University, Waltair along with one self-addressed envelope of 9"x6" size (without affixing postal stamps).

The candidates may also remit cash at the Cash Counter in the School of Correspondence Courses towards application form. POSTAL ORDERS AND CHEQUES WILL NOT BE ACCEPTED.

The prescribed application forms, syllabus and model question papers are also available at the following two places at New Delhi and also at our 24 Study Centres on payment of Rs. 20/- through Demand Draft drawn in favour of the Director, School of Correspondence Courses, Andhra University, Waltair-530003.

PLACES OF SALE OF APPLICATIONS :

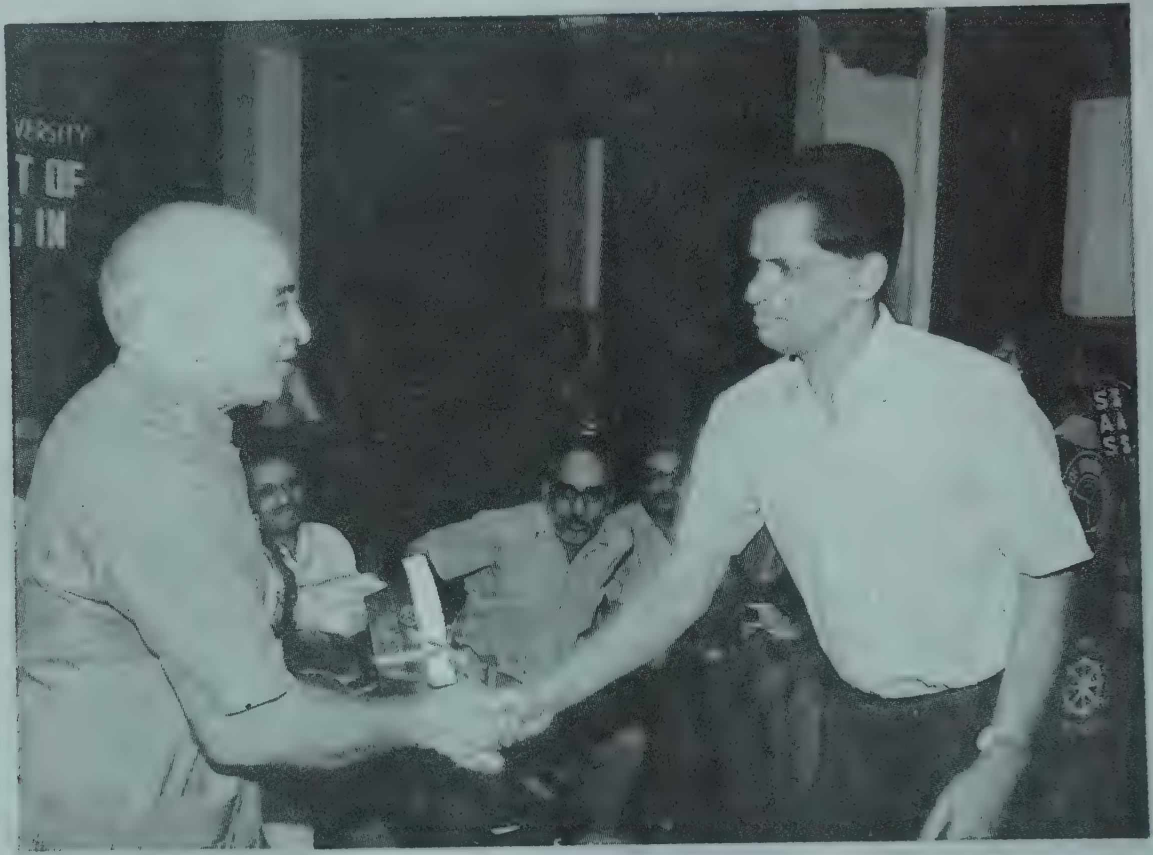
(A) At New Delhi : (1) Sales Counter, Association of Indian Universities A.I.U. House, 16 Kotla Marg (2) Sri Venkateswara College, Benito Jurez Road, Dhaula Kuan, New Delhi -110021.

(B) Study Centres : (1) Government College, Srikakulam, (2) M.R. College, Vizianagaram; (3) Mrs. A.V.N. College, Visakhapatnam; (4) Govt. College, Rajahmundry; (5) P.R. Govt. College, Kakinada; (6) Sir C.R. Reddy College, Eluru; (7) S.R.R. & C.V.R. Govt. College, Vijayawada; (8) A.C. College, Guntur; (9) D.N.R. College, Bhimavaram; (10) A.B.M. College; Ongole; (11) Silver Jubilee College, Kurnool; (12) Indian Institute of Management and Commerce, Hyderabad; (13) A.M.A.L. College, Anakapalle; (14) R.S.R.K.R.R College, Bobbili; (15) Noble College, Machilipatnam; (16) V.S.R. & N.V.R College, Tenali; (17) Govt. Degree College, Narasannapeta; (18) S.G.S. College, Jaggayyapeta; (19) S.S. & N. College, Narasaraopeta; (20) S.K.B.R. College, Amalapuram; (21) V.R.S. & Y.R.N. College, Chirala; (22) V.V. & M. College, Ongole (23) Sri Sarvodaya College, Nellore; and (24) K.B.N. College, Vijayawada.

PROF. V. ABRAHAM
DIRECTOR

Notes :

1. The applicants should clearly mention whether they require Entrance Examination application form for B.A. or B. Com.
2. The Entrance Examination fee is Rs. 75/-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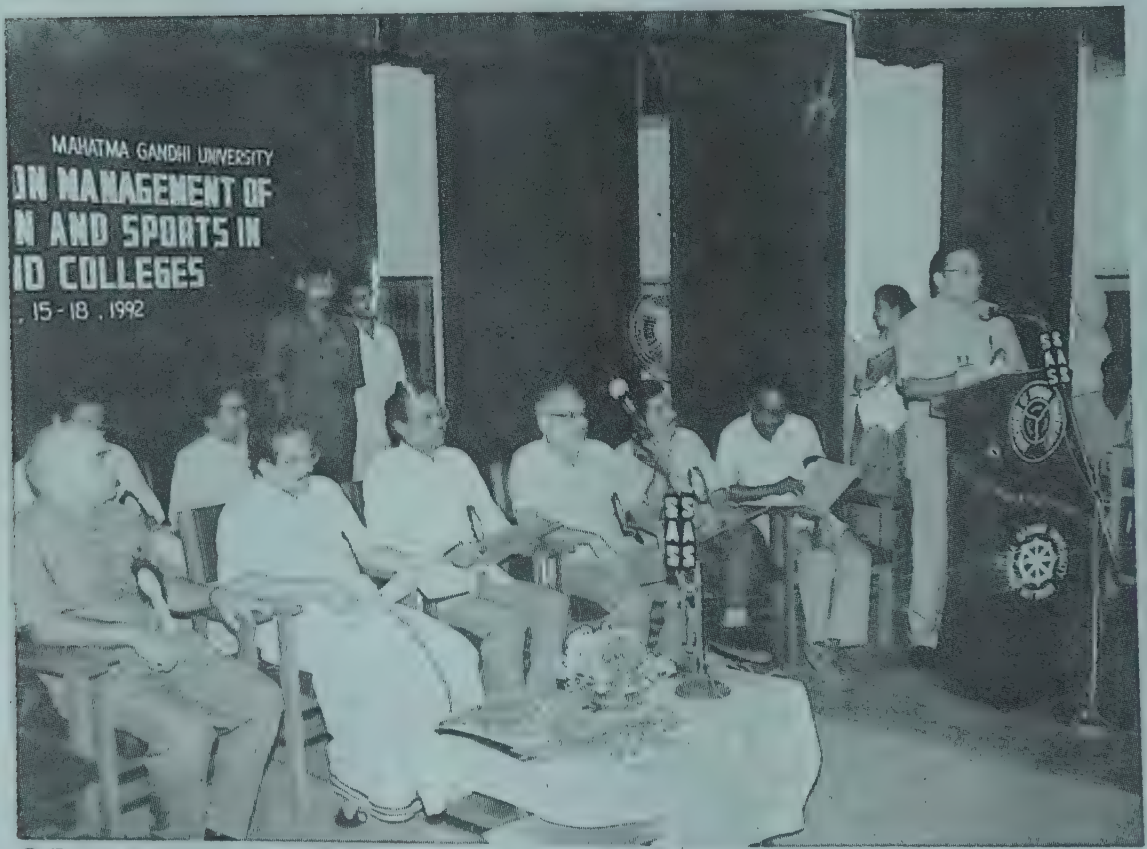
Prof. S.K. Agrawala, Secretary, AIU, presenting
the Prize Money to Mr. P.P. Mathai
of Kerala University


MAHATMA GANDHI UNIVERSITY
ON MANAGEMENT OF
N AND SPORTS IN
ID COLLEGES
, 15-18 , 1992

Dr. G.P. Gautam, Deputy Secretary(Sports), AIU, speaking at the valedictory function of the workshop. Others seated on dais (from L to R) are Prof S.K. Agrawala, Secretary, AIU, Shri E.T. Muhammed Basheer, Kerala Education Minister, Dr. A. Sukumaran Nair, VC, Mahatma Gandhi University and Prof. K. Aravindakshan, Syndicate Member, M.G. University.

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92-5

University News

ISSN – 0566-2257

MONDAY, OCTOBER 19, 1992

Rs. 5.00

LIBRARY &

National Citizen's Award

Dr. Shanker Dayal Sharma, President of India, presenting the National Citizen's Award-1991 to Prof. Ramlal Parikh, Vice-Chancellor, Gujarat Vidyapith, for his sustained lifelong contribution in the field of education.

CLASSIFIED ADVERTISEMENTS

IGNOU

Advt. No.2/Rectt./92/T.A.

Applications are invited from Indian citizens for filling up the following posts in the Indira Gandhi National Open University :

1. PROFESSORS : ONE each in

Physics, Chemistry and Library Science

Scale of Pay : Rs. 4500-150-5700-200-7300 plus allowances as admissible under the University rules.

Qualifications

Essential : An eminment Scholar with published work of high quality (in the relevant subject) actively engaged in research. Ten years experience of teaching, research and/or extension work. Experience of guiding research at doctoral level.

OR

An outstanding scholar with established reputation who has made significant contribution to knowledge (in the relevant discipline).

READERS : ONE each in

1. Political Science
2. History
3. Education (Specialisation in Primary Education/Teacher Education/Educational Technology)
4. Physics
5. TWO in Management Studies
   - i) Human Resource Management
   - ii) Organisational Behaviour

Scale of pay : Rs. 3700-125-4950-150-5700 plus allowances as admissible under the University rules.

Qualifications

Essential : (a) Good academic record with a doctoral degree or equivalent published work (in the relevant field). Evidence of being actively engaged in research, innovation in teaching methods or production of teaching materials;

(b) Five years experience of teaching, research and/or extension, excluding the time taken for Ph.D of which at least three years should be as Lecturer or in an equivalent position.

LECTURER IN NURSING : ONE

Scale of Pay : Rs. 2200-75-2800-100-4000 plus usual allowances as admissible under the University rules.

Qualifications

Essential : M.Sc. in Nursing (general or with specialisation) from a recoganised institute/University with a minimum of 3 years professional or teaching experience.

LECTURER IN LIBRARY SCIENCE : TWO

Scale of Pay : Rs. 2200-75-2800-100-4000 plus usual allowances as admissible under the University rules.

1. **Eligibility :** Only those candidates who have qualified in the eligibility test conducted by the UGC for Lecturership will be eligible for consideration for appointment as Lecturer in Library Science.

Candidates who have sectured 55% or more marks at Master's Degree Level and exmpted from the eligibility test if :

- i) they have passed UGC/CSIR JRF examination; or
- ii) they posses M.Phil/Ph.D degrees; or
- iii) they are pursuing a Ph.D programme and expect the degree to be awarded before December 1992.

2. **Qualifications : Essential :** a) Master's Degree in Library Science with atleast 55% marks/equivalent grade or an equivalent Degree from a foreign University; b) Good academic record.

Desirable : A Doctor's Degree Library Science or research work of an equally high order.

Additional Qualifications (For all teaching posts) : Experience and proven ability in imparting education through various communications media and innovation in distance teaching methods and materials.

Note : (1) It will be open to the University to consider the names of suitable candidates who may not have applied. (2) Relaxation of any of the qualifications may be made in exceptional cases in respect of all the posts on the recommendations of the Selection Committee. (3) Canvassing in any form by or on behalf of the candidates will be a disqualification. (4) Candidates from outside Delhi, when called for interview will be paid to and fro Second class rail fare only. (5) the University reserves the right not to fill up any of the vacancies advertised if the circumstances so warrant. (6) No correspondence on the status of the applications can be entertained at any stage. (7) Normally every effort will be made to add further communications to the applications and to incorporate change of address, if any but in no case the University will take any responsibility on this account. Hence, candidates are advised to make their own arrangement for redirection of letter sent to them.

The prescribed application forms can be had from the office of the Director (Teachers' Affairs) located in Block No. 4, Room No. 20, Indira Gandhi National Open University, Maidan Garhi, New Delhi-110068

The prescribed application form can be had by post also from the above address on written request accompanied by a self-addressed and stamped envelope (size 28 x 13 cms) bearing postage stamps of Rs. 4/-. Request not accompanied by stamped self-addressed envelope will not be considered. Application forms will be issued only upto one week before the last date for receipt of applications.

Applications duly completed and securely fastened along with attested copies of degree, other certificates, mark-sheets, published research articles, etc. should reach the following address by **13.11.92**

Director (Teachers' Affairs)

Indira Gandhi National Open University,

Maidan Garhi, IGNOU Post Office,

New Delhi-110068.

The candidates will have to produce the original documents relating to the age, qualifications, experience etc. at the time of interview.

Applications incomplete in any respect, and those received after the due date shall not be entertained.

REGISTRAR

2 NOV 1992

UNIVERSITY NEWS

VOL. XXX **OCTOBER 19**
No. 42 **1992**
Price **Rs. 5.00**

A Weekly Chronicle of Higher Education published by the Association of Indian Universities

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Editor :

SUTINDER SINGH

Rethinking University Set-up

Never before has the university system in India been under such pressures as at present. Practically all the universities (barring a few) are carrying a financial deficit of 1 to 5 crores each; certain universities in some states in desperation have also started drawing on the provident fund of their employees, which is legally impermissible. The State has not been able to put in even six percent of GNP in education (it is investing less than four percent and even that seems to be threatened under the new economic policies of the Government of India of 'adjustment and stabilisation'). The Plan outlay for higher education in relation to total outlay for education has increased from 18% in the First Plan to 44% in the Seventh Plan, yet in real terms it might be much lower considering the escalation in costs. Presently the State subsidy to higher education is about 85 percent. The tuition fees are abysmally low and they have, more or less, remained unaltered since the past fifty years and more. They present a striking contrast to the high fees charged in many private primary and pre-primary schools. This low fee structure in the universities, it is argued by some and perhaps rightly, accounts both for lack of motivation amongst students and absence of accountability amongst teachers.

The university system is also under challenge because of the non-employability of most of the graduates it turns out and the consequent need for linking education to work experience (or vocationalisation of education), as well as for the actualisation of the university's obligations to the community. The several accretions to the university's traditional responsibilities of teaching and research, increase in the number of students and academic disciplines, pose challenges as regards the management of universities as also to its traditional structure.

The challenges and pressures can no more be wished away, nor can they be pushed under the carpet. When the very survival of universities and colleges is threatened, the educationists and education planners are obligated to put their brains together and find viable solutions. Hence the title 'Rethinking University Set-up'.

The articles included in this issue of *University News* have discussed some of these problems and suggested some solutions. Privatisation of higher education, more particularly professional and technical education, establishing some correlation between unit cost of education and tuition fees, creation of some educational financing corporation for soft educational loans inter-mixed with a liberal scheme of scholarships and fellowships for economically weaker sections, certain reforms in taxes, and several other such suggestions have figured in these articles. Other related issues of equity, excellence, management and structure have also been referred to. Each one of these suggestions requires a thorough discussion, in the context of the nature of State that we have envisaged in the Constitution and its likely impact on the public education system in the country, both in the short and long terms.

The theme for discussion at the UGC Conference of Vice-Chancellors which is scheduled to meet on November 19, 1992 at Pt Ravishankar Shukla University, Raipur is 'University Funding'. These articles, we are certain, shall contribute to the enrichment of the discussion at that conference.

—— *S.K. Agrawala*

Towards Excellence in Higher Education

An Opportunity and A Challenge

A Gnanam *

Human Resources occupy a place of pride and preeminence in the socio-economic development of a nation. Experiences of developed nations reveal a positive correlation between the development of human resources and economic development. Recognising the role of human resources, developing countries like India have initiated multipronged measures to promote the quality of human resources. Higher education has been acknowledged to be an instrument of human resource development and in fact, the latter is deemed to be a function of development in higher education. In view of its varied significance, higher education was assigned a place of primacy in the educational pyramid of India in the post independence era and the Government of India paid special attention to its growth. The Industrial Policy announced in 1948, the Indian Constitution adopted in 1950, Five Year Plans implemented since 1951 and the Kothari (Education) Commission appointed in 1964 have strongly underlined the vital role of higher education in promoting economic growth with social justice in the country. Both the central and state governments have greatly contributed to the development of higher education through diversified educational plans and the expenditure earmarked by them for higher education has been escalating year after year.

Consequent to these policy directions and efforts of the governments, higher education has made rapid and remarkable strides in the last four decades. Today, India has the unique distinction of possessing the largest system of higher education in the world next to the USA and Soviet Russia. Despite this phenomenal progress in higher education, it is also equally true that there is widespread dissatisfaction and disappointment among us about its existing status. We tend to think that the system of higher education has largely failed to achieve its noble objectives of excellence, quality and relevance, to tackle the challenges emerging in the country, to create able and skilled labour force and to establish an employment oriented egalitarian society in India. In fact, higher education in India today appears to be in deep crisis situation.

Although there is a grain of truth in this popular allegation, it is still possible to make use of higher education as a tool of our country's development through a series of reforms consistent with social changes. Today the country is facing acute and deep economic crisis and the government has endeavoured to tackle the situation through a package of economic reforms. If these reforms are to succeed, then the system of higher education should also be simultaneously rejuvenated. In other words, educational reform should become an adjunct of economic reforms. Therefore, in the emerging context, it becomes imperative to transform the character of the system of higher education. This new spectacle constitutes both an opportunity, and a challenge to the academicians, academic administrators and policy makers. If we fail to capitalise this opportunity, the posterity will have no respect for education and will lose faith in the system itself. Keeping this present and future scenario in mind, it becomes necessary to adopt the following measures designed to improve the system of higher education in India.

Admission Policy

In the first instance, the expansion of the system should be checked and the number of aspirants for university education should be contained. The government should bring a legislation to ban the establishment of new colleges and universities atleast for the next ten years. Facilities to admit additional students in the existing institutions alone should be encouraged and expanded. Under no circumstance, opening of colleges by politicians in their constituencies to satisfy their people or for any other pecuniary consideration should be permitted. Likewise, the government should frame and implement a strict admission policy in the existing institutions so that higher education is made accessible only to those who have genuine interest and motivation to pursue higher education. The doors of higher institutions should be strictly closed to indifferent and disinterest persons who would like to join the colleges and universities just for passing their time or for getting a degree for the sake of social status. The goal of future admission policy should be quality upgradation rather than quantitative expansion. We should strive to create a cadre of meritorious graduates needed for the country's development rather than concentrating on the burgeoning numbers who become irrelevant unemployables once they leave the portals of higher education. The admission number should be decided on the basis of the facilities available in each institution. Admission should be based on merit decided through an open entrance examination. At the same time, care should be taken to ensure the admission of able and meritorious students belonging to weaker sections of the society through an enlightened policy of reservation.

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* *Vice-Chancellor, Pondicherry University, Pondicherry-605104*

The advocacy of meritorious admission and the banning of new institutions should not be misconstrued as contrary and inconsistent to our goal of 'education for all'. We do realise that Indian people comprise 50% of the world's illiterates, that large sections of children have to go without acceptable level of primary education and that it is obligatory on our part to spread education to them. It is quite possible to achieve this objective by developing and strengthening open learning system. The higher educational needs of deserving persons can be met through Open Universities rather through opening general arts colleges and universities. The system of higher education can be improved only when its quality is controlled and maintained at all levels. Providing 'education for all' is really a noble democratic trait; but it should not become a source of deterioration in the standard of education in any manner.

Curricular Reforms

Higher education can be made more meaningful only when we introduce radical changes in the irrelevant and traditional curriculum adopted since the days of the establishment of universities in India. The course content of higher education programme should be redesigned and related to societal needs and country's development. Programmes have to be rewritten to demonstrate the application of concepts in real life situations. It is essential to teach basic theories in classrooms; but at the same time, we should illustrate through different angles of the society as to how these theories are really relevant and problem solving in life. For instance, students learning economics of administration should have an opportunity to have experience in different departments of administration and understand their problems, in addition to classroom learning of theories of administration. The tilt towards application orientation in our course structure will have tremendous impact on the students. The knowledge acquired in a particular area will improve several fold; they will get an opportunity to understand real life situations and problems; they will be better equipped to get a career of their choice and the students would evince genuine interest in the entire learning process which is badly lacking today. The course structure should also necessarily establish close linkages between educational institutions and the industries or other relevant organisations of commerce and government.

In a rapidly changing social setting, it becomes necessary for every student to acquire knowledge in subjects allied to his main subject according to his innate preference. But the existing universities do not offer sufficient opportunities to the students to select subjects of their choice. With a view to enhance such opportunities to students, Pondicherry University has introduced a novel scheme known as 'Choice based credit system' from this academic year. In this new system every student is given full freedom to choose, in addition to this main subject, all those subjects which in his opinion are essential to attain his future ambitions and goals. For instance, a student of management can choose any subject in the allied departments of Economics or Commerce. Since a student gets a course of his personal preference, he can devote his undivided attention on studies and the present disinterestedness and lethargy of students characterizing the contemporary higher education will disappear. In this choice based credit system, complete internal assessment is adopted. The teacher who teaches examines his students and assesses their knowledge throughout the semester through tests, quizzes, seminars and end semester examinations. The teacher directly participates in question paper setting and valuing answer papers. The whole examination system is open. The students are shown the answer books and can discuss their marks with the teacher. This system removes the lacuna in the existing marking procedure. The teacher gives grades to his students, i.e. he essentially arranges the students in his course in order of merit. This system induces the students to work throughout the year; dissuades them from indulging in undesirable activities dissipating their time and energy; fosters cordial relationship between the teacher and the taught; establishes peace and harmony in the campus thereby creating an atmosphere congenial for real learning and reduces the scope for political intervention in the functioning of the university.

Faculty

The quality of education hinges on the skills, ability and the quality of teachers working in our colleges and universities. Therefore, there can be no difference of opinion on the need to up-date their efficiency as a precondition for improving the quality of higher education. Persons of high calibre with real aptitude for teaching should alone be recruited for faculty positions through impartial and objective recruitment procedures. Teachers should be fully accountable to the students and the institutions in their teaching assignments. At the same time, we should augment basic facilities required for improving the quality of teachers. Orientation programmes to new entrants, refresher courses to experienced teachers, incentives to meritorious teachers and institution of Distinguished Teacher Awards can go a long way in promoting the skills and qualities of teachers. Promotion of teachers to higher positions should be based on their past teaching and research experience, their contribution to the growth of the institution and the welfare services rendered to the students. We should have the courage to distinguish between good teachers and bad teachers and to extend special incentives to good teachers. Only a system of incentives and disincentives can uphold the dignity of teaching profession. Every educational reform should revolve around the creation of devoted, dynamic, committed and motivated teachers. In pursuance of this objective, the University Grants Commission has implemented certain laudable measures. Among others, these include the recruitment of teachers on the basis of common qualifying tests, organisation of specially designed orientation and refresher programmes for college and university teachers and upward revision of pay scales.

Research

Promotion of qualitative research is a *sine qua non* for achieving the goal of higher education. Innovation and research are the hallmarks of higher education. In fact, the system of higher education can be developed only through the findings of high level research carried out in the fields of science, technology and social sciences. Therefore, we should adopt comprehensive measures to develop high quality research in our universities. At the outset, we should be clear about the type of research to be developed in our institutions. In the past, we have concentrated more on basic or fundamental research. There were occasions when we undertook repetitive research resulting in dissipation of scarce resources and precious energy. Consequently, we have not contributed substantially to new discoveries, development of knowledge or enhancing the standard of living of the people. Therefore, it may be prudent to reduce our preoccupation with basic research. It may not be really worthwhile to pursue and promote everything that seems interesting, important or feasible. This, however, does not underrate the overriding significance of fundamental research in our quest for new knowledge. If it is absolutely necessary, we may choose such of those areas where Indian scholars possess better and special advantages over their foreign counterparts.

Further, fundamental research should help to create and recreate theories and concepts based on Indian empirical evidences. These attempts should receive the approval and appreciation of foreign scientists also. In the present context of economic development, it is desirable to discover innovative methods of production which can reduce costs, increase the availability of essential commodities and help to increase the standard of living of common man and the under privileged who are the victims of soaring prices. Therefore, it becomes necessary to determine the areas of research which are conducive to the country's development and initiate action to pursue useful and relevant research. In certain areas of research, we can identify few educational institutions, talented faculty and students and research functions can be shared among them. As a result, we can maximise our research benefit with minimum costs.

It is essential to increase the basic facilities required for pursuing high level research in a congenial atmosphere. In the contemporary situation of resource crunch, it may not be possible for the University Grants Commission or for the universities to provide finance needed for the creation of infrastructural facilities required for research. The funds required for this purpose should come from outside the university system. For instance, science and technology agencies extend financial support to the universities in the form of time bound research projects. But in future they should also help in the setting up of sophisticated research facilities in educational institutions and providing such other infrastructural facilities which will attract best talents from all over the country. For this purpose, these agencies should earmark atleast 20 percent of their research grants exclusively for augmenting research facilities in the universities.

Likewise, industrial institutions and other donor agencies should come forward to finance the infrastructural facilities in the universities. It may be recalled that in countries like Japan 80 percent of Research and Development (R&D) Budget of the universities is funded by non-governmental industrial organisations very well linked with academic institutions. In India also such a system should be evolved and propagated and it should be remembered that there is vast scope in India for cooperation between industries and universities in research and development (R&D). We should also ensure a close rapport between government policy making and our research efforts. In fact, in future, healthy situation should be created in which our research findings should form the kernel of socio-economic and scientific policies of the government.

University Administration

The existing university administration system leaves much to be desired and hence calls for sweeping reforms. The basic objective and philosophy of administrative reforms should be to reduce unwarranted and unnecessary controls and to provide autonomy with accountability to all those who are involved in university administration. Reduction in controls and decentralisation in decision making can avoid needless delays and can impart new dynamism to administration. Therefore, it is necessary to offer autonomy and freedom to every department of the university so that they become independent entities. The university administration should intervene in the functions of the department only in the event of implementation of policy based decisions.

Equally important is the need for developing universities as real autonomous bodies. The government should mitigate its control over the universities gradually. It should confine itself to the formulation of higher education policy and the provision of finance required for the implementation of these policies. In no other respect, the government should exercise control over the universities or intervene in their academic functioning. Likewise, the UGC should decentralise its decision making process so that delays in the implementation of educational programmes can be avoided.

Most of the universities in India are of affiliating type which has established a patron client relationship between universities and colleges which has considerably hindered the growth of right type of higher education. Therefore, we should restructure the existing university system by conferring autonomy gradually to the colleges and by making them independent institutions. This will help to reduce the burden of the university *vis a vis* affiliated colleges and it can find more time to concentrate more effectively on its own academic work. At the same time, each autonomous college would be free to prescribe its courses of study and syllabi, combination of subjects, admission of students and recruitment of staff and evolve methods of teaching, evaluation and examination and decide areas of research.

The Kothari Commission stressed the need for autonomous colleges as far back as 1964. The New Education Policy of 1986 also endorsed this timely measure. It was proposed to confer autonomy to atleast 500 colleges during the Seventh Plan Period. But it is quite unfortunate that only 80 colleges all over the country have come forward to accept autonomy so far.

It is also equally regrettable that a few State governments and teacher associations have not welcomed this excellent system. Everyone should realise that the creation of autonomous colleges is the best way for enhancing the standard of future higher education. Therefore, the government should pursue the scheme of autonomous colleges unrelentlessly. A high power council should be established in every State and it should be entrusted with the responsibility of preparing programmes for development of autonomous colleges. Simultaneously, the government should offer concessions and incentives to colleges willing to implement the scheme of autonomy.

Overcoming the Financial Crisis

It is a common fact that the financial position of the universities is woefully bad and the financial crisis in the universities has become acute and severe. In the last two years the educational budget had been sliced down in the context of the enveloping economic crisis. Of course, this is a recent crisis. But lack of finance has always been a perpetual problem for universities since the advent of planning. Although the minimum educational expenditure should hover round six percent of the Gross National Product (GNP), we have been spending only 1.2 percent to 3.9 percent between 1950 and 1987. Lack of resources has been the major factor responsible for not developing universities in proper direction. Unless we overcome the resource crunch haunting the universities today, it would be well nigh impossible to implement any university reform. Therefore, universities should take the cudgels and augment both internal and external resources. Measures of improving the financial conditions of the universities should include the following :

Firstly, there should be an upward revision in the fees collected from the students in accordance with the inflationary situation. We may adopt a dual pricing policy in case the poor and backward students are likely to be affected by this revision of fees. We should remember that although the per capita government expenditure incurred on a student has increased several fold in the last 30 years or so, the university fee structure has remained invariant. Therefore, enhancement of university fees and rate is inevitable and opposition to it is untenable and unwarranted. Those who clamour for qualitative education should receive it only at a price. It is quite ironical and surprising that students who are willing to pay exorbitant rates of tuition fees in private institutions, oppose marginal increase in the same in government run colleges and universities.

Secondly, university should endeavour to establish endowments from philanthropists. Income from such endowments can help to improve university finances. The universities can also save a part of its funds and invest the same in income yielding assets and income generated thereby can supplement the scanty resources of the university.

Another measure of equal importance is the prudent and productive spending of the meagre resources of the university. Unproductive, extravagant and doubtful expenditure of all kinds should be avoided at all costs. The expenditure of the university should be based on its objectives. This can help to reduce such expenditure as are not directly related to the achievement of the objectives of the university. If the administrative reforms suggested above can be adopted we can effect considerable economy in our expenditure. For instance, the expenditure on examination wing can be considerably reduced when the complete internal assessment system is introduced in the university. Similarly, under the choice based credit system, the students have the benefit of expertise from all the departments of the university and hence the expenditure on invited faculty from outside or guest lectures can be reduced to the minimum. Thus the improvement in financial position of the university calls for two pronged measures, namely, augmentation of the internal and external revenue and economy in expenditure.

Finally, encouragement of private initiative in the sphere of higher education deserves objective consideration. We should recall rather with a sense of appreciation the invaluable services rendered by private institutions in the cause of higher education in the past.

(Contd. on page 13)

Towards a New Movement in Higher Education

A Position Paper

C.R. Mitra*

I. A Necessity Revealed

This Position Paper is prepared in response to a call to contribute a paper for a Special Number of the *University News*, which is to act as a backdrop for a national conference of Vice-Chancellors to discuss "Rethinking University Set-up". This conference assumes a special importance because it has been oriented to focus particularly on the general financial crunch, tight university budgets and exhortations to universities to raise non-governmental financial resources.

Higher education is defined here as all education and training at the post-secondary stage. This definition encompasses what is often described in the literature as 'further and higher education, and 'post-secondary education'.

This paper begins with the conclusion that it is necessary to foster a new movement in higher education in India. The conclusion was a outcome from some earlier articles also in the *University News* (1,2,3 & 4). This paper will endeavour to elaborate the idea-construct further.

The gap between what we want and what we get is the central issue of concern and discussion. Much energy has been spent in discovering means and methods of closing this gap. In reality the gap has only widened, although massive amounts of public funds were provided. If now this fund flow from government dwindles, surely the present effort can never close the gap.

This paper acknowledges the above reality and hopes to sensitise the system to begin thinking in a radically different way. In this discussion the paper encompasses both the traditional as well as the non-traditional systems. But first is an analysis of the traditional system.

II. A Paradoxical Situation

The higher education system in India is the third largest in the world. Its variety, complexity, sophistication, resource endowment and physical and intellectual capital are objects of envy of many nations. It can take pride in the fact that some of the best institutions in the world exist here and also for the fact that its graduates are performing impressively in foreign settings. The country has produced several original educational thinkers as well as outstanding educational entrepreneurs. Yet it has become a despair of many, both inside and outside the system. The paradox is that the system endowed with so much advantage cannot or is unable to solve its own problems through its own devices. What is disturbing to note is that the expression of public disenchantment with the system is equally shared with disarming frankness by members of the system itself.

The explanation for this paradox must lie in the origin and particular style of development of the system. It was planned, funded and implemented entirely by governmental bureaucracy. Perhaps the government's justification in doing all the homework on behalf of the system can be traced back to the ambition of a new nation to quickly establish new institutions for a glorious future. What was initiated as a developmental process, with full dependence on the government, merely perpetuated as a fact of existence.

The system is justifiably shocked that the government's practice of underwriting cost and underpinning the structure is proposed to be phased out as an exit policy. Before the system can fully recover from the shock the government has already prescribed methods to deal with the crisis which is seen purely in financial terms. Thus, the system has been exhorted to discover new resources on its own and also raise additional resources by enchancing fees. It is significant that nothing has been said about that optimal management of existing resources.

The recent events have placed the system at a crossroad. It can act as a lobby and put pressures on the government or it can seize the initiative and reduce its total dependence on the government. The burden of the argument in this paper is that the system should seek the second option. Perhaps the existing reality will yield a hybrid combination. Even that would be welcome because the system will acquire a hybrid vigour.

III. Limits to Present Approach

Since all rules and procedures flow from the government, a serious look at the existing approach must be made and limits to them must be recognised. A few selected items are chosen below with appropriate comments on each :

1. The system is too large and amorphous to deal collectively and put pressure on the government. Those who subscribe to this viewpoint can easily see that the collective campaign will degenerate into an individual institute fending for itself. This

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development will certainly create egoistical, self-centered and self-serving power points.

2. The financial crisis has not affected only the higher education system. It has affected all institutional activities of the nation. Thus to hope that there exist providers of funds who have to be merely approached to invest in education is to run away from reality. In fact, the entire history of higher education in India would prove that such resource inputs have been only few and sporadic and certainly a very insignificant fraction of the total cost of operating the system.
3. Increasing revenues through enhancement of fees is simply not workable. The cost of education is an outcome of an accounting exercise. But fees are determined by the prevalent policy. Having perpetuated a system where fees are not even remotely related to the cost of education, talk of enhancement of fees is nothing other than riding into the eye of a storm. No individual institute or even the whole system can unilaterally move into a policy option without the backing of the government and the political system in the matter of chargeable fees.
4. Resource management would be reduced to a mindless exercise if the script given by the government is to be followed faithfully. In so many decades the governmental system of planning and rules of operation gave no evidence of a strategy by which some institutes were made financially or educationally autonomous. The system has to look elsewhere, hopefully inwards, to discover coherent methods and procedures for the management of its resources. It is not certainly suggested that a wall of antagonism is to be created between the government, and the system. What is clearly indicated is the requirement that the system should start thinking on its own and help work out a new equation with the government.

IV. Revaluation of Values

A system which has been nurtured under the tutelage of the government expectedly developed ideas, concepts and values which cannot stand up outside the protective walls of such of tutelage. Thus, many terms and words in currency, while valid within these protective walls, cannot stand scrutiny outside the same. A few of these terms would be now dissected in the hope that a fresh dialogue can begin without being hamstrung by the restricting meaning of these terms (8&9).

1. *Privatisation*

A call has been given for private participation in higher education and the idea has been epitomized in the National Policy on Education of 1986 as well as in the 8th Plan Document of the Planning Commission. But the word has been always rigidly linked with notions of commercialisation, self-paying institutes, etc. It does not require any detailed examination to conclude that the government is only inviting private money to bail it out. It wants that this system in its present form must be preserved. This is not a call for a real private initiative, where new institutions are to be created entirely by private money and injection of business processes, market forces and economic use of resources.

It would be educative to examine how far this policy can go and what it can yield. Mention may be made of a mushroom growth of institutions which are variously named as self-paying, self- financing, capitation, etc. In the famous dictum of one problem leading to another, the government is required to step in to determine the fees the self-paying institutions can charge. Even when through a stroke of governmental legislation a modicum of an order was restored, the court stepped in. Thus, the freedom given to private initiative to establish a college was heavily circumscribed by the government acting as a referee all the time. And when the government overlooked, the court came as a super referee.

2. *Recognisation*

There is an obsessive desire to pronounce on the acceptability of an institution through formal governmental process. Conceding that the desire was prompted by the discharge of a responsibility that the system should curb misuse and fraudulent action, there is simply no evidence that pure reliance on regulatory devices has served the original intention. On the other hand whenever an aberration has been discovered new rules have been again written. Still the problem has not been satisfactorily handled. It would be interesting to ask whether in reality the end-user, namely the employer has always depended on the governmental stamp of recognisation. In this connection two points are worth noting, namely (i) that a sizeable delivery system exists because of acceptance by market forces although it is not recognised by the government; and (ii) all self-financial educational institutions are recognised and controlled by the corresponding university and yet the government cannot let them alone.

3. *Funds*

The system entertains some simplistic views on funds. All methods of correcting the system end up in asking for more funds. It seems that the lack of money is the only factor. This theory has never been seriously put to test. Success of some lone institutions which achieved the educational tasks set out in public policies without receiving public funds has not been publicised. It would not be an unkind assertion that even if all the money was given the system can not transform itself. The strategy has to be greater effectiveness in the system with the present money.

V. Acquisition of an Autonomy

The article argues that the system should distance itself as much as possible from a model born and elaborated in a pervasive presence of the government and its mode of thinking and doing things. It has to ensure that agency is restored to it. It is not the occasion to immediately draw a blueprint of an alternate model. What is required is an emergence into a state of transcendence where system thinks on behalf of education. Let it gracefully accept the cut in government share in higher education; but simultaneously become a watchdog that the money is indeed used for eradication of illiteracy and rapid growth of primary education. Let it offer alternate modes of finance management perfected through real practice. Let it become a new think-tank for the nation in all matters of institutional development and maintenance of its health in the area of education.

It is wrong to say that the system is crippled by overwhelming circumstances. The circumstances can be intelligently dealt with if the system breaks out of the confines of a fallacy of hope that only the government can do the miracle. The system has means within itself to emerge into freedom. There has to be a pradigm shift in its ways of thinking and doing things. Instead of writing another set of rules and centrally designed models it should join the movement where interconnected ideas could be spearheaded towards several concrete solutions, each valid for the context and the circumstance from which the design drew its inspiration. The call is to undertake a voyage and discover new paths. But before this the system should cause a process of identification of the various modes of education and training which exist and are known as the non-traditional system.

VI. Rediscovery of the System

An uninhibited mapping of the total postsecondary educational manifestations of the country was made recently. It was revealed that actually two delivery systems are functioning in the country. The findings are summarised below:

- The Visible System
  - Recognised, known and dominates discussions on matters of education.
  - All education and training leading to degrees/diplomas/certificates, recognised by the government for recruitment and/or promotions.
  - Estimated size =30 Lakhs (5 Lakhs of professionals).
- The Invisible System
  - Not formally recognised, unknown, not included in discussions on matters of education.
  - Estimated size = 5 Lakhs of professionals.
  - Prepares students for a profession/vocation/occupation in a competitive market.
  - Inhouse structured training schemes of large organised industries (private and public) and established large training industries.
- Both the systems have the following features :
  - They are not to be differentiated in terms of private or public, because both private and public function in each system.
  - Both have a common task of creation and augmentation of a stock of professionals for the nation.
  - The Visible System largely pursues government approved curricula and is almost exclusively dependent on public funds.
  - The Invisible System is provided by industry which meets all the cost and also pays tax to the government. It follows its own curricula which is constantly updated in coherence with the profile of technological change.
- Surely it is a tempting thought that if the Invisible System is brought in the mainstream of higher education, the nation will benefit by the entry into the system of financially autonomous educational institutions. The purpose of this article is not to dilate on the process by which this attractive proposition could be secured. Since this article began in the context of private contribution towards higher education it is important to point out that complete self-contained private provision in higher education exists and the Visible System must be made aware of it. It is thus that a new movement would be enriched by a congruence of both the systems.

VIII. Some Lone Voyagers

This paper began with a mission of pointing out existence of viable and successful operating systems which are not dependent on government funds. It is the duty of the article to identify some institutions in both the visible and invisible systems which have indeed discovered new paths of achieving financial self- sufficiency. The impressionist view is that there are several praiseworthy examples. However, brief reference to only two cases (BITS, Pilani and NIIT, New Delhi) will be made in this article because the author happened to be intimately connected with them. (5,6&7) In the context of the crisis faced by India's higher education these Case Studies offer valuable insight and strategic pointers for worthy universal applicability. Some of these are listed below :

- BITS, Pilani moved from deficit financing to financial autonomy. It is the first university in India to do so.

- NIIT, New Delhi moved from a training industry to a proprietory college. This is a landmark development in India.
- The two institutions moving from different ends converged into a new syndrome where educational achievements are to be measured in terms of market acceptance of graduates and coherence of the system in the current global thinking in education and its productivity.
- Both the institutions avoided inherited normative processes and empirically created new designs.
- Both consciously sought a departure from the conventional pattern and discovered new identities through commitment on relevance, purposiveness and cost-effectiveness.
- Both institutions have made structural arrangement in the programme of studies to nurture university-industry linkages in their many facets.

IX. The Epilogue

Freedom is not an unalloyed joy. It is a sober responsibility. It is a challenge to build institutions with untramelled thoughts. Joining the movement is only the first step. The system should constantly remember the caution given by Machiavelli :

> "There is nothing more difficult to take in hand, more perilous to conduct, or more uncertain in its success, than to take the lead in the introduction of a new order of things."

References

1. "A Composite View of Higher Education" br C.R. Mitra, **University News**, 27 April, 1992.
2. "Internationalisation of Education" by C.R.Mitra, **University News**, 22 June 1992.
3. "Financial Directions for Higher Education" by C.R. Mitra, **University News**, 13 July 1992.
4. "Accreditation Revisited" by C.R.Mitra, **University News**, 28 September 1992.
5. "Existential Reality of Engineering Education Towards 2000" by C.R. Mitra, paper accepted by Frontiers in Education Conference sponsored by IEEE and ASEE, USA.
6. "Managing Innovation in Higher Education" by C.R. Mitra, study prepared for IIEP (UNESCO).
7. "Finance Management in Higher Education" by C.R. Mitra, study prepared for IIEP (UNESCO).
8. "Privatisation in Higher Education" by C.R. Mitra, Concept Paper prepared for CII.
9. "Higher Education and the Market" by C.R. Mitra, Concept Paper prepared for CII.

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REFERENCE: ENCYCLOPAEDIAS
Encyclopaedia of Teaching Languages in India in 35 Vols /*Sita Ram Sharma* (Set) 17,000
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Role of Society, Particularly the Private Sector, in University Education

Malcolm S. Adiseshiah*

University Education

University education in this note is taken to cover undergraduate as well as postgraduate education. By and large, undergraduate education is offered by colleges, of which there are 7000 in 1990 in the country and postgraduate education by 150 universities, of which there are 60 for professional higher education – engineering, medicine, including dentistry, pharmacy, management, law, teacher training, which are in a class by themselves.[1] They are provided both by colleges and universities, and offer an integrated course comprising a certain degree of undergraduate general (arts and science) education followed by professional courses ending, in the case of medicine and law with a year's internship and probation.

Society and its Role

Society is an all-inclusive comprehensive term which in this note covers the government and agencies set up and run by government, private agencies ranging over a wide spectrum, religious, linguistic, ethnic, professional, and humanistic. Historically, education originated from the non governmental private sector, in the religious orders such as the educational christian orders and missions, the Koranic schools and madarssas, the ashram schools, gurukulas and the gurusishya formats. Thus, higher education owes its origin to the religious orders in Europe, the Arab world and India, China and Japanese societies. As long as education was essentially the relation between the individual scholar and a group of learners, the various private agencies were the principal actors. But when education came to be conceived, as was done from the start of the twentieth century, as a fundamental right of every person, as it became incorporated in the standard of living of a community, which later was regarded as an essential part of the minimum standard of life, and as it became an essential to modern living, particularly to employment and earning an income, education took on dimensions when it had to be planned and funded by the government – particularly at the pre-university level. The main actor in pre-university (school) education is today the government.

In regard to university education, the quantitative dimension is not the main determinant. Because university education is not a fundamental right of every grown-up (18-25 years of age) adult. It is still selective. It is not in the main, a public good like water, air, or an open park, as in the case of elementary education and even secondary education, which every person is entitled to. Higher education from this point of view is not a public good. It is not and should not be freely available to any one and everyone. Its selectivity is where society and higher education mutually interact.

Mutual Interaction

The major interaction between society and higher education is in the area of social ambience and societal values. Higher education is one part of society and social action and development and therefore reflects the mores and values of society. If society acts in accordance with a written and unwritten code of integrity, university education also will be conducted in accordance with such integrity. University education today is criticised for its various forms of dishonesty, nepotism, corruption. Cheating in examination is common and widespread, bribing of examiners, of answer paper valuators and of question paper setters, in order to gain some unmerited advantage is becoming the order of the day. Violence with the use of various kinds of weapons like knives and even guns is resorted to settle differences in the university as between teachers and students and as between various student groups. The university no longer rests on the unwritten contract betwen members of the university community – teachers, students and service personnel in order to work full time at learning and pushing at the frontiers of knowledge.[2] In all this, the university reflects society and its standards and values. If society is dishonest, if the student sees his parent use unfair, unethical means to get him admitted to a course of study, the youngest and newest member of that university community – the student regards that as the norm by which he should conduct himself. And so too in the matter of honesty, intergrity, the settlement of difference of opinion by dialogue and discussion or by violence, society stands as an exemplar to the university. University mirrors social norms and values, no more or no less. It is felt by some that universities ought to be a step ahead of society in the matter of values and conduct, because the university is still a sheltered place for the academic community where the hustle and bustle of the market place and the deals and compromises made there need not be reflected in the university community. This is in part true, but in this matter, the university can only be one step ahead of society; and we have reached a point of social chaos and moral deprivation in society. That being one step ahead by the university community is totally inadequate and irrelevant. This mutual interacting threads as between society and the university, demand that society should turn around and maintain certain minimum standards of integrity, honesty, intellectual and spiritual commitment to peace, truth and non violence along lines of what Gandhiji taught and demonstrated both in his life and in the society of his day, which by and large followed him in this matter of values and mores. The moral of this discussion of the mutual interaction between society and university education is that the problem faced by university education for which the remedy is not endogenous but exogenous. And till that exogenous remedy gets under way, university education will not be living upto its ideals or its potential.

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Society's Contribution to University Education

At the simplest and most direct level, the financial contribution to university education made by society may first be analysed. Here there are currently many models which may be broadly classified into 4 groups : group (a) are universities and colleges founded, funded and run by the government of the states; group (b) are universities and colleges founded, funded and run by a private agency; group (c) are universities and colleges founded and run by a private agency, but funded entirely by the government of the state; and group (d) are universities and colleges founded and run by a private agency and funded partly from non governmental sources and partly by the government of the state. The vast majority of universities and colleges in this country belong to category (d), but have been moving into category (c) as a result mainly of pressure from the teachers, trade unions, and associations.

The funds available to a university and college are (i) fees from students – for tuition, for examination, for sports, for laboratories and workshops, for library which form around 15 percent of the university/college funds; (ii) income from endowments, capitation charges, gifts from interested donors which form 5 percent of the funds expended by university/colleges; and (iii) the grant from the government of state in various forms, block grants, matching grants (matching UGC, union or foreign government grants), grants to cover the deficit faced by the university/colleges – all of which form around 80 percent of the needed funds.[3] More recently, since the 70s, there are (b)type institutions being established and proliferating, particularly in engineering and medical education, notably in Maharashtra, Andhra Pradesh, Karnataka, Tamil Nadu, and Gujarat because of explicit or implicit government encouragement. Another widely prevalent educational institution is the tutorial college or the parallel colleges as they are called in Kerala, offering and increasingly supplementing university education. In the case of the parallel colleges of Kerala, the parents have testified that their teaching is so appropriate to the examination needs of the students that their wards are registered in the university/college just to mark their attendance in these institutions, absent themselves from the classes either playing games or on strikes and gheraos, whereas there is never an absence in the parallel colleges. These university/institutions are financed by the non governmental sources – the students and the family.[4] It should be noted that there are sources of non governmental funding or funding from sources outside the government budget which have not been tapped in this country, as they are in Latin America and Eastern Europe in the case of the student loans, graduate taxes, educational cesses.[5]

It should be noted that in the above analysis of the financial contribution of the various groups of society – from governments to philanthropical educational agencies, two important non governmental sources of finances for university education have not been included or referred to. One is the funds expended by parents on food, clothes and books of their wards. This comes to a sizeable amount which one study computes at Rs. 8566.45 a year.[6] For India as a whole, household expenditure on education in 1984-85 is estimated at Rs. 1308 crores.[7] (This figure includes the households' expenditure on school education). The second omission is what are called as the opportunity costs of university education which are the incomes foregone and which would have been earned by the university students, if they were engaged in some income earning activity instead of studying in the university. This income foregone in the case of students in universities in 1988 ranging from Rs. 6000 to Rs. 42,000 per student per annum has been calculated at various and varying amounts, depending on the assumptions relating to the level of employment, the duration of employment, and the emoluments attached to the employment.[8] If this were added to the non government funding of university education, then this part of society's contribution to university education is seen to be much higher than the share of the governments contribution to it.

But this adding of opportunity costs to compute the financial contribution of the private sector to university education is misleading, because opportunity costs are a theoretical uncertain quantum and cannot be put along side of the fees paid by students and the educational expenditures incurred by the parents which are specific and known quantities.

In this area of the financing of university education, there is need for a much higher contribution from the private sector, especially the private corporate sector than what is being made at present. For one thing the main beneficiaries of university education still continue to be those from the top 2 classes of societies. At the time of the Education (Kothari) Commission, a survey made for NCERT[9] showed that the 80 percent of university and high school completers were from the top 20 percent of society. 10 years later a similar study by the University Grants Commission showed that 70 percent of university completers were from the top 20 per cent of income earners. This has serious social and equity implications. In our system of taxation over 70 percent of government revenue is from indirect taxation and this percentage keeps on increasing year after year.[11] Direct taxes are paid by the well to do individuals and profit making companies. Indirect taxes are paid by all citizens and as the majority of them, of around 60 percent are living in poverty or just above it, the indirect taxes are in the main paid by the poor. The heavy subsidisation by the government of university education to the tune of 80 percent as seen earlier means that university education is acting as a conduit for transferring resources from the poor to the rich. This strengthens the case for type (b) of university education – that is of university and colleges founded, funded and run by private agencies without any financial contribution from government. Certainly it makes the case for fees of all kinds, capitation, tuition, examination, sports, library and laboratory being levied at a level where the costs of education in the university and colleges are covered. The minority of students from the non rich sector of society can be helped through students loans, rather than free studentships or scholarships, because given sufficient time – say 10 years for the repayment to commence – students from the poor strata will be employed and be earning adequately to repay their loans, which can then be redeployed for further student loans.

There is another means of ensuring and augmenting the private sector's particularly the corporate sector's financial contribution to university education. The majority of the products of the university, the graduates, are employed by the private corporate sector and the public sector. Only a small minority of the university graduates are self employed. As was suggested earlier, the one area of society's financial contribution which has not been developed in this country is the revenue which accrues to the university/college from taxing the employed university graduates. There are problems here, such as maintaining separate accounts for the tax proceeds from graduates employed in the public sector and those employed in the private sector. There is also the problem of sharing out the tax proceeds as between the many different university and colleges, without involving the taxed employees in an elaborate questionnaire relating to the identity of his/her university/college. Probably a start can be made by levying a graduate tax on those graduating from engineering, medical, dental and management college courses, because here there is a strong relationship between the education and training given and their occupation and productivity, and while there is substitutability as between different engineering firms and medical institutions, there is low degree of substitution between graduates of these universities and graduates of the run of the mill arts and sciences universities. This revenue source can be gradually extended to taxing graduates from teaching, law, science faculties. After a time, the government could evolve a rule of thumb method of taxing the private and public corporate sector, at say a certain percentage of the pay package of the employees – only ensuring that the tax is not passed on to the employed ones and later to the consumer of their products.

Non financial contribution of the private sector to university education

The private corporate sector provides higher/enhanced levels of internal and external efficiency to the university education. It is found that the university education offered by the corporate sector provides quality education, at what turns out to be lower cost. In this matter, due to the economics of scale and intra firm and intra university/college competition, the university education offered by the private corporate sector has not only a high level of efficiency, its efficiency between the university and vis a vis industry and consumers keeps rising. This is really the case for what the National Education (Kothari) Commission called "Autonomous College and Autonomous University Departments": These institutions should be freed from rigid rules and regulations which have come to be called the system of affiliated colleges and affiliating universities, so that the institutions can use their autonomy to devise their own curriculum, develop innovative teaching and research methods, evaluate the results of such study, learning and research in relation to both the demands of the market and the highest canons of learning and knowledge. One simple adhoc test of this contribution of the private sector, including the private corporate sector, to qualify in university education is to be found in the fact that the first group of autonomous colleges and university departments which was in the Madras University flow from the private sector colleges and university departments, including 3 from the private corporate sector. Today there are some 120 autonomous colleges and university departments, and except a handful few, all of them are from the private sector and ensure increasing levels of quality, efficiency and low cost.

Future Directions

Enrolment in university and college education, both general in arts and sciences, and professional has been increasing at the rate of 8.5 percent per year during the

2 decades of 60s and 70s, but has been slowing down to around 3.5 percent in the 80s and is expected to stabilise at 5 percent upto the turn of the century.[12] This is a heartening trend, because a) it is in accord with the forecast of the two National Commissions on Education, that of 1966-68 and that of 1985-86, will release much needed funds for universalising Elementary Education and b) it will also relieve the educated unemployed pressures on the employment market. However, it is important that this slowing down of the growth of university and college education which is primarily due to its rising cost, particularly the cost of the new technology it is using, that the quality of education, and its internal and external efficiency does not deteriorate. This will be possible if the non governmental bodies, particularly the private corporate sector plays a major determining role, in ensuring quality and efficiency as noted above. University and college education should be increasingly freed from the constrictions of 'affiliation', which is a feature to be found only in university education in this sub-continent, and the self regulating mechanism proposed by the National Policy on Education 1986 put in place. That mechanism proposed is a system of state councils of higher education which will provide the normative guidelines and the self enforcing codes attached to it. This also means that the fear expressed that without the government's heavy regulatory hand, the university education system would go awry has not only no empirical basis, because in all countries of the world, outside the sub-continent, university education is free and helped and run by itself with the help of the private sector efficiently and effectively. That also would be the only means of contributing to the equity of the system, and not placing the students of well to do families at the forefront and the children of the poor and weaker sections at a handicap. In this system, what is essential is for the government of the state to continue for the present to provide the needed funds, may be even a little near half, while the private sector particularly the private corporate sector is allowed over a period of 4 plans, that is over two decades, to increase its financial contribution five-fold. This is also in line with the new economic and social policy now being instituted in the country, and on which there is not much time to lose.

References

1. Annual Report: University Grants Commission 1990-91, New Delhi 1991.

   Annual Report: Department of Education 1991-92, Ministry of Human Resources - Government of India, New Delhi 1992.

2. Malcolm S. Adiseshiah: **Let My Country Awake:** Unesco, Paris 1970.

3. **Education and Development:** National Commission on Education 1966, Government of India, New Delhi 1968.

   Education in India: Ministry of Education, Government of India, New Delhi 1980.

   Statistical Abstract of India 1988: Central Statistical Organisation, New Delhi 1989.

4. **Towards a Learning Society:** Report on Kerala University, Trivandrum 1988.

5. G. Psacharopoulus and M. Woodhall: **Education for Development: An analysis of investment choice:** Oxford University Press, New York 1985.

   World Bank: **Financing Education in Developing Countries: An Exploration of Policy Options,** Washington DC 1986.

6. P.V.B. Nair: **Cost and Returns of University Education,** B.H.Publications, Trivandrum 1990.

7. J. B. Tilak: Family and Government Investments in Education, **International Journal of Educational Development,** Washington DC 1990.

8. **Ibid:** J.B. Tilak – Family and Government Investments in Education.

9. **Field Studies in the Sociology of Education,** NCERT, New Delhi 1971.

10. **Development of Higher Education in India: A Policy Framework,** University Grants Commission, New Delhi 1978.

11. 1992-93 Budget Speech: Lok Sabha: February 1992, New Delhi.

12. **Vide:** J.B. Tilak – Family and Government Investments in Education.

Towards Excellence in Higher Education

(Cont from page 5)

They can contribute to quality improvement of higher education, reduce the need for starting more colleges by the government and thereby reduce financial commitment and expenditure and help to achieve the goal of "education for all". It is surprising that much hue and cry has been raised whenever efforts at privatisation of higher education are initiated especially, when we have accepted private sector initiatives in almost all sectors of economic activity such as, agriculture, industry, business, export, import, health, transport and so on. Therefore, opposition to privatisation of higher education is unjustified. It would be prudent and in the best tradition and interest of higher education to encourage private initiatives as long as it does not harm the interest of any section of the society.

The measures of higher educational reforms suggested above are not complete and exhaustive. One can think of alternative palliatives also. But all measures, like different routes, should lead to the same destination, namely, achievement of excellence in higher education so that the future system becomes really meaningful and relevant to the emerging challenges of the society which is poised for a big leap in the 21st Century.

The American Experience of Self-Financed Universities Lessons for India

M. Glen Johnson*

With severe financial problems facing the Indian university system, many educational leaders seem almost irresistibly attracted to the American model of self-financing universities which has produced some of the most well endowed and prosperous institutions of higher earning in the world. As with all "quick-fix" solutions, however, this one is likely to produce mixed results. In this paper, I discuss the origins and nature of the self-financed university system in the United States, examine some of its positive and negative aspects and link that experience to the current Indian situation.

A Dual System

The American system of higher education is a dual system. Part of it is state supported and part of it is self-financing, i.e., funded privately. Over the years, however, more and more government funding has flowed into the private universities while state universities have increasingly tapped private funding sources. The dual system has become so mixed in fact that some institutions have both state and private components. Some of the schools of Cornell University, for example, are state supported while others are private. Nevertheless, there are still significant differences between self-financed and publicly financed institutions and this remains one of most frequently used and useful distinctions in the analysis of higher education in America.

Although higher education was predominately private in the early years of the republic and the US remains the home of some of the most distinguished private institutions in the world, the system has become more and more state supported over the years in terms of numbers of students served. Until after World War II, the majority of students enrolled in higher education attended private, self-financing institutions. Public institutions, however, showed continuous growth. In 1950, public and private institutions accounted for roughly equal shares of college and university enrollment. By 1975, however, government supported institutions were enrolling nearly 80% of students, a figure that has remained fairly stable since. Thus, in terms of student enrollments, the American system is about 80% state supported.[1]

Role of Central Government

It might also be noted that, in sharp contrast to the Indian system, the role of the central government in higher education in America has been minimal. State universities are run and financed by the individual states. In the United States, there is nothing comparable to the central universities of India, and nothing comparable to the UGC. In fact, until the end of World War II, the central government role was negligible, with one notable exception.

That exception was the use of surplus land to initiate the land-grant college system, a network of agricultural training and research institutions which contributed significantly to the high levels of productivity attained by American agriculture. The Land-Grant College Act of 1862 provided for federal grants of surplus land to the states. The states sold the land and used the proceeds to establish state controlled agricultural colleges, many of which incorporated a broader educational mission. Thus, although the initiative was federal and the resources were federal, the implementation, control and continued funding rested with the states.

Federal involvement in higher education began to grow in 1944 when the Congress passed the so-called "GI Bill of Rights" through which the Federal Government funded higher education for returning war veterans. Well over two million veterans received some higher education under the "GI Bill" in its first decade. This was the beginning of the modern system of financial aid for higher education in America and the beginning of higher education on a mass scale. By the late 1980s, the Federal Government was providing some form of financial assistance to nearly half of the undergraduates enrolled in higher education in the United States.

In the last thirty years or so, the central government has begun to play a role of some significance in two other broad areas; 1) prohibiting discriminatory practices in all aspects of university activity and monitoring compliance, and 2) providing funding for significant portions of the research activities of universities.

Although some influence and control has come with increased federal involvement in financial aid, non-discrimination and research support, it would still be true that states retain a predominant role in guiding, controlling and supporting public higher education in America and that self-financing private institutions retain a large measure of autonomy.

Quality and Type of Funding

Neither self-financing nor public financing has been a guarantee of quality in American higher education. There have always been top-ranked universities in both

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systems – and both have been well represented among the weaker universities. Harvard, Yale and Princeton – all private institutions – have epitomized high quality from the earliest days, but so, too, has the University of Virginia, the first state university, founded by Thomas Jefferson to fulfil his abiding faith that educational opportunity without regard to wealth or social class was both the essential prerequisite of a functioning democracy and one of its most fundamental commitments. At the other end of the country, Stanford, a private university, and Berkeley, the flagship of the state university system in California, share proximate locations both in the San Francisco Bay area and on any ranking of top universities. Similarly, both state and private institutions are found at the bottom of the rankings of institutions of higher education in America.

Self-Financing in the American Context

How are the so-called private universities financed? Such institutions are much more heavily dependent on tuition charges than are public institutions. Table I provides information about funding sources for private and public institutions. The figures in this table are aggregate figures for all institutions. If we singled out the wealthier and more prestigious private institutions, we would find a larger proportion of revenue coming from private gift and endowment income. Similarly, the best state universities would be able to claim revenue from federal grants on a par with the best private universities. Nevertheless, the figures reveal starkly that private institutions are tuition dependent while public institutions are dependent on state government appropriations.

TABLE I : Revenue Sources for Private and Public Insituttions of Higher Education in the United States 1987-88

Revenue Source	*Private Institutions*	*Public Institutions*
Tuition and fees	39.1%	15.0%
Appropriations		
Federal	0.5	1.9
State	0.9	41.3
Local	–	3.3
Government grants and contracts		
Federal	16.2	8.4
State	1.6	2.1
Local	0.7	0.4
Private gifts, grants & contracts	9.0	3.4
Endowment Income	5.2	0.5
Sales and Services		
Educational activities	2.3	2.6
Auxiliary enterprises	10.9	9.8
Hospitals	9.5	8.8
Other	4.2	2.6

Source : Reproduced from The Alamanac of Higher Education : 1992 by the Editors of "The Chronicle of Higher Education." University of Chicago Press, 1992, p. 68.

In addition to these sources of income, private universities enjoy certain tax subsidies. As not-for-profit institutions, they are exempt from federal and state taxes on their income (although there is increasing controversy and some variation in the tax treatment accorded to the profit making auxiliary enterprises of non-profit educational institutions). Moreover, gifts to such institutions create income tax deductions for the donors.

Almost all the self-financing institutions are in the not-for-profit sector. Profit making institutions account for only a very small segment of American higher education. The recent resignation of Benno Schmidt as President of Yale University in order to head a new project developing for-profit elementary and secondary schools led some analysts to conclude that for-profit education has a brighter future than its past. But that remains to be seen.

Tuition Dependence and Financial Aid to Students

Private colleges and universities are tuition dependent. Forty percent of their income is derived from the tuition and fees charged to students. Tuition charges in the prestigious private colleges and universities are very high indeed. Tuition at some private colleges and universities now hovers around $20,000 per year and comprehensive charges approach $30,000 when room, board and other costs are included. Average tuition charges for undergraduates at private four-year institutions in the United States was $10,017 in 1991-92 (contrasted with $2,137 in public institutions) and the average comprehensive cost, $16,292, while average family income was around $35,000 per year. Unmoderated, such charges would clearly put quality private education beyond the reach of all but the most affluent families, a situation incompatible with the egalitarian values of American society and, indeed, the very situation about which Thomas Jefferson worried so many years ago.

Therefore, such a situation is not allowed to go un-moderated. No college or university finds it acceptable to cater only to the children of the "rich and famous." So financial aid has become a central part of funding arrangements in private institutions (*see Table II*). In 1986-87, nearly three quarters of all undergraduate students enrolled in private institutions received some form of assistance compared to just over half of those enrolled in public institutions. Almost 60% of students in private institutions received aid from federal government sources; almost half received aid from the institution itself. Assistance usually includes a mixture of various elements; outright grant, loan from institutional or government funds or commercial loan guaranteed by the institution or the government, and paid employment provided by the institution. Often the aid package for a given student will come from a mixture of public and private sources.

TABLE II : Financial Aid to Full-Time Students 1986-87

	Percent Receiving Aid by Source				
	Any aid	*Federal*	*State*	*Institutional*	*Other*
Undergraduates					
All institutions	59.2	47.7	22.1	21.4	7.3
Private institutions	73.4	57.0	31.4	48.2	10.5
Public institutions	52.3	41.9	19.4	13.2	6.3
Master's Level					
All institutions	68.7	31.9	6.2	47.6	5.9
Private institutions	70.6	36.1	6.2	47.1	7.9
Public institutions	67.5	29.3	6.1	48.0	4.7
Doctoral Level					
All institutions	87.9	22.9	5.6	76.3	6.3
Private institutions	84.7	23.7	3.4	74.5	6.0
Public institutions	89.9	22.5	7.0	77.5	6.5

Source : Adapted from U.S. Bureau of the Census, Statistical Abstract of the United States : 1991 (11th edition.) Washington, DC, 1991, p. 164.

Financial aid in expensive colleges and universities can be considered a form of private progressive taxation in which wealthy parents are asked to pay more for the education of their children so that the institution can use some of that money to provide assistance for the children of less wealthy families. This system has reached the point where statistics recently revealed that the families of students in private colleges and universities in New York State actually had average incomes a few hundred dollars *less* than the families of students in the public system; public funds support educational institutions for families with higher average incomes than those whose children attended private institutions.

There is another implication of this system. It reduces the funding benefits of tuition increases since some significant portion of every increase in tuition must be allocated to increased financial aid. How significant is the portion allocated to financial aid will depend on the percentage of students on financial aid and the size of those financial packages, figures which vary significantly from institution to institution. Some critics have argued that this fuels a vicious cycle of spiraling tuition costs and it is a fact that over the last decade or so tuition charges have increased at more than double the overall rate of inflation. Indeed, the cycle becomes even more vicious from the point of view of the institution when government financial aid programmes are cut or fail to keep pace with tuition increases. In such cases – and they have been fairly frequent in recent years – even more of the tuition increase is eaten up by increases in institutional financial aid budgets.

Mobilizing Other Resources for Higher Education

Tuition dependence and the nexus between tuition and financial aid have led private institutions to search for other sources of funding. They have found such sources mainly in philanthropic giving, the creation of endowments and in research funding provided by the Federal Government.

There is little doubt that one of the major virtues of the system of self-financing universities in the United States is the effectiveness of that system in mobilizing private resources on a large scale to support education. In 1989-90, voluntary contributions amounted to some $684 for *each* of the 13 million plus students enrolled in higher education in America, a total of nearly $10 billion. Almost half of that total was contributed by private individuals (some $4.77 billion) of which about $2.5 billion came in the form of gifts by college and university alumni. Although public institutions increasingly tap these sources, the bulk of voluntary contributions still go to the private, self-financing colleges and universities. Harvard and Stanford lead the list, each receiving slightly more than $200 million in voluntary donations in 1989-90.

One can sense the magnitude of this voluntary contribution by comparing the $10 billion to the approximately $31.5 billion appropriated by all 50 states to support the public colleges and universities. Thus, voluntary support of higher education – most of which goes to private institutions – amounted to almost one third of total stated appropriations to public institutions and keep in mind that the private sector enrolls just over one-fifth of all students.

Voluntary giving to higher education has a long history in the United States. Over that long period, many of the best and oldest universities have developed large endowments which generate current operating income. Here again, public institutions have also established endowments but the largest endowments still belong to the private, self-financing institutions. For a long time Harvard has been the most well-endowed university in the nation. In 1990, the market value of the Harvard endowment was $4.65 billion. Some 150 colleges and universities in the United States had endowments worth $75 million or more. About three- quarters were private, self-financing institutions. With the exceptions of the University of Texas system and Texas A & M University (Special cases because of endowments created by legislative action using oil revenues) the top 24 institutions of that list were all private, self-financing institutions. Depending on the endowment management policies of particular institutions, earnings equivalent to as much as 6-10% of the value of the endowment may be taken each year to support the operating budget.

None of this – neither the annual contributions nor the endowments – comes without effort. Although there are instances of major donations being made unexpectedly – "out of the blue," as it were – most people have to be asked before they will give money even to an institution of higher education. This is all the more true since no profit motive is involved in most such donations. Accordingly, as self-financing institutions have tried to develop larger endowments and have relied more heavily on annual contributions to support their operating budgets, they have also established growing staffs in "development" offices, a euphemism for "fund-raising" offices. Typically, one of the senior officers of the administration in any university is the Director of Development, increasingly titled Vice-President for Development. He/She will be assisted by officers responsible for alumni relations and annual giving, special gifts including endowment enhancements, government grants and foundation grants as well as large research, writing and other support staff. The university usually provides a number of publications and special events designed to "massage" prospective donors and enlist their support. A well paid and increasingly professional fund-raising community has grown up in American higher education, especially in private institutions.

The chief executive officer (CEO) (usually called President in the American system) spends a lot of time fund-raising. Presidents of public institutions spend their time fund-raising with state legislators and other state officials; presidents of the private institutions must court foundations and private donors, a more heterogeneous and fluid group. The traditional image of the university president as leader and role model in the intellectual activities of teaching and research is a relic of bygone days, increasingly inaccurate as a picture of the activities of the contemporary chief executive officer. Indeed, the former president of one of America's best known universities recently complained that he spent so much of his time asking people for money that he was nothing more than a high class beggar! Presidents spend so much time away from their campuses seeking funds that they often draw criticism for being unavailable to deal with campus issues and provide campus leadership. Many colleges and universities have created another top administrative post usually called Provost or Executive Vice-President designed for an "inside man" – or often, these days, an "inside woman" – as an alter ego to the "outside man" the CEO has become.

As noted, the largest single source of voluntary contributions – amounting to one-quarter of the total – is the alumni of the colleges and universities. There are interesting additional links between alumni and their alma maters reinforced and legitimated, if not generated, by the donor connection. The graduates not only give money in remarkably significant and growing amounts (alumni giving increased by some 74% over the five years preceding 1989-90), they also maintain active involvement in the affairs of the university. Associations of alumni have become important players in most of the major colleges and universities in the US, especially in the private, self-financing institutions. Both through such associations and acting as individuals, alumni pressure the universities on a variety of matters including curriculum and faculty but often focusing on the intercollegiate athletic programme. In fact, alumni involvement continues to be one of the major strengths and difficulties of such programmes, the subject of frequent regulation and disciplinary action by the National Collegiate Athletic Association (NCAA). But, if alumni involvement in athletic programmes is problematic, their loyalty to and interest in the university often provide a crucial resource of informed and active participation in public deliberations on higher education policy in the United States.

Voluntary contributions from various sources raise important issues of external influences on the universities. There are many ways in which donors have sought to influence university policies and practices. The rich donor father urging admission for his marginally qualified daughter to a highly selective and competitive college; the right-wing industrialist/benefactor urging privately upon a university president that a prominent left-wing faculty member be denied tenure; a large foundation offering an endowment on condition that attention to issues of science and technology be strengthened in the curriculum; a foundation funded by a foreign government (Japan, Taiwan and Saudi Arabia, among others, are active in the US) establishing an endowed chair in studies of their country while implying that the holder of that chair should be sympathetic to their government; an office of the US Government (whether it be the CIA acting clandestinely or the National Endowment for the Arts acting quite openly) supporting research projects designed to fit the needs or prejudices of the government agency – all of these offer examples of the influence of money in a system of higher education in which donations have become a major part of operating budgets. All of these have happened in American higher education; some have been considered quite appropriate, some inappropriate, even illegal, and some debatable. Standards of propriety have varied over time and circumstance.

Over the years, the American society and its universities have developed some defences against the potential abuses of the influence a system of voluntary support inevitably brings. For one thing, universities have developed significant requirements of disclosure, reporting and publicity. Many universities now require that the source and terms of major donations be made public and that the source of major research and conference grants not only be made public but indicated whenever and wherever the results of those conferences and research efforts are presented. The system of disclosure is made more effective by the fact that the most sophisticated requirements are usually found in those universities which receive the largest number and amount of donations. Harvard University, for example, require that grant sources be reported not only for grants which go directly to the university but for those received by individual faculty members as well. Rules of disclosure vary from institution to institution and, of course, disclosure by itself does not prevent donations considered improper by some members of the university community. From time to time, donations or conditions offensive to some members of the community become issues on American campuses. Although disclosure rules and other defenses have certainly reduced the incidence of the most egregious cases of influence peddling, it would be impossible to sustain an argument that improprieties no longer attend the system in which voluntary contributions play a significant role in operating budgets.

Insuring Quality

Self-financing is also related to maintaining and enhancing quality in higher education. We have already noted that the American experience suggests that self-financing is no guarantee of quality. But what is to keep the necessity of raising funds – by tuition, by gifts and grants – from eroding a commitment to quality in higher education? What, in short, is to keep self-financed institutions from degenerating into simple diploma mills? Indeed, the struggle to recruit students in a tuition dependent funding situation as well as the search for voluntary contributions have led some institutions to make unacceptable compromises of quality. From time to time, certain universities have even become notorious as expensive refuges for students from well-to-do families unable to obtain admission to higher quality institutions. But this has happened far less often than one might expect. What countervailing factors help maintain quality? There are a number of answers to this question.

First, Americans seem willing, indeed eager, to pay for quality or, at least, perceived quality. The most prestigious and highest quality institutions in America are also the most expensive – and they are also the most difficult to get into. There is a high positive correlation between cost and quality rankings among the private institutions in America. Moreover, increases in tuition seem to have little negative effect on the demand for places in high priced institutions. Indeed, there is some evidence to suggest the opposite, i.e., that increases in price generate increases in demand because they generate impression of enhanced quality. In general, the Americal experience suggests that if colleges and universities are left free to set their own fee structures, the best institutions will charge the most and will, in turn, therefore, generate funds necessary for further enhancements in quality. Perhaps the experience of the IITs suggest the same conclusion in the Indian setting.

Another factor encouraging attention to qualitative performance is the accrediting system for monitoring quality. Although there are state accrediting agencies and professional accrediting agencies for professional education, the major work of accreditation in the United States is done by regional autonomous (i.e., non-governmental) accrediting agencies set up by the universities themselves. They accredit both private and public institutions. Unless accredited by one of these bodies, a college or university will find if difficult to attract students or funds from foundation or government sources. Accordingly, institutions are mindful of the need to insure judgements of high quality during the periodic inspection visits of teams from the accrediting agencies. Of course, the high quality, prestigious institutions are almost never in danger of losing their accreditation as a result of these visits but they are attentive nonetheless because the independent report will be important to their image, their alumni relations and fund-raising efforts. Less high quality and less prestigious institutions face probation and, sometimes, loss of accreditation with very serious consequences indeed. Other, widely consulted, commercial ranking systems also encourage attention to quality although some critics argue that the wrong kind of attention is encouraged by some evaluations.

In America, the best private institutions have also been the source of many of the initiatives in higher education which have been subsequently adopted by public institutions. They have been places of experimentation and innovation. In this sense they have provided a challenge to the public systems of higher education and a standard of quality against which public education is often measured. Though they educate only about 20% of college and university students today, their overall impact as a goad to higher quality in American higher education is far more substantial.

Relevance for India

What relevance does this experience have for India? At first glance it might seem that the answer is very little. The situations are very different. The US started with a predominately self-financed system which has gradually become more state centered in terms of both funding and number of students served. India starts with a heavily state centered system in which the self-financed sector is relatively small. The United States started with a highly decentralized system in which the central government played almost no role; the Indian system involves a very much more substantial role for the Centre. The United States started with an abundance of land and other resources which could be mobilized to support higher education; India has little free land and very heavy alternative demands on other resources.

But there are, I think, important lessons from the American experience which India can utilize by adapting them to the Indian situation – lessons of both opportunity and caution. In the first place, as in the United States, substantial private resources appear to exist which could be mobilized in many of the same ways in the service of higher education. In America, private higher education pioneered the mobilization of private resources – both student fees and voluntary contributions – and private institutions still predominate. But they have created a structure and a climate in which state institutions have also been able to mobilize significant private resources to offer additional support to an often financially beleaguered public system. The experience of the private institutions has led many public institutions to establish autonomous or quasi-autonomous "university foundations" to mobilize private funds which are then turned over to the state university. Both the experience of the American private university and that of the public systems may offer fruitful ideas for Indian universities.

Second, as the American system which started out as a sharply distinct system has evolved into a mixed system with the intermingling of public and private support in both types of institutions, so it may be advisable for India to consider a mixed system finding creative ways of intermingling private resources and strengths with the state system already in place. Autonomous "university foundations" in state universities are one such creative idea but there may well be others such as encouraging the development of community foundations and corporate philanthropy and nurturing alumni loyalty and giving.

A third lesson has to do with the problem of insuring access to higher education in an increasingly tuition dependent situation. In America, higher education was, with some exceptions limited to a relatively narrow elite until the end of World War II. Participation by both government and educational institutions in expanded financial aid programmes has been essential to insure that families of modest means are not priced out of the increasingly expensive market for quality education. As India struggles to make student fees a more significant component of higher education funding, the American experience of government-private partnership in a need-based financial aid system may offer some important lessons.

Finally, attention to some of the potential for influence peddling and inappropriate interference along with the demands for mushrooming development staffs and excessive demands on CEOs may enable India to avoid some of the difficulties against which the American system is still struggling.

Privatization is the buzzword of the moment but, in higher education at least, both public and private resources and involvement will be required in India as in the United States if these countries are to prepare their students adequately for the challenges of a global economy and a global market in ideas.

To Our Readers

Knowledgeable and perceptive as they are, our contributors must not necessarily be allowed to have the last word. It is for you, the readers, to join issues with them. Our columns are as much open to you as to our contributors. Your communications should, however, be brief and to the point.

Added Role for Indian Universities

D. Swaminadhan*

"A University stands for humanism, for tolerance, for reason, for progress, for the adventure of ideas and for the search for truth. It stands for the onward march of the human race towards even higher objectives. If the Universities discharge their duty adequately, then it is well with the nation and the people"

– Pandit Jawaharlal Nehru

The Present Scenario

The university system in India over the years has undergone changes in terms of conditions, requirements and size. In addition, waves of socio-economic and political changes have been impinging on the system. The impact of the undesirable part of such a situation has been trying to disturb the equilibrium in universities. The system has, therefore, to build up inner strengths to ward off such unwanted influences in the best possible manner and live upto the expectation of Pandit Nehru. If the university system were to respond and measure upto the expectation of Nehru in the above situation, it has to lay stress on and pursue four important elements. They are : (i) Excellence (ii) Modernisation (iii) Interaction, and (iv) Self-reliance. These are all inter-related.

True pursuit of excellence in all spheres of activities of a university will help imbibing and nurturing in the university life the qualities of humanism, tolerance, reason and adventure of ideas, search for truth and thereby help leading the humanity towards even higher objectives.

Modernisation in terms of courses, facilities, evaluation methods and faculty upgradation will in turn enrich teaching, research, examination system and extension activities. Modernisation equips better the university to play its role effectively.

Interaction and inter-dependence are well recognised concepts in the present day global situation. Universities are no exception to this. They should come out of their ivory tower concept and interact with outside world viz., the society, the government, sister institutions, lower level institutions, industrial organisations, etc. Through interaction, the university's excellence should be shared for national development.

Autonomy in the true sense should be the privilege of the university system so as the enable it to respond with full vigour for fulfilment of its objectives and goal. Already considerable academic autonomy relating to offering courses, evolving evaluation methods, teaching, research and extension activities is available. Since finances is one of the important factors in achieving the goal of a university, there should be ample financial freedom as well. In the present system of funding there is rigidity coupled with deficiency. The deficiency part is going to be more in the present situation of resources crunch. Financial autonomy is vital for continuation of universities as centres of excellence and need of the hour is to initiate steps for fund generation and reduce its dependence on the government to the extent possible, thus paving the way towards self-reliance.

Momentous changes are taking place on the international scene. The end of the cold war, the transformations in Eastern Europe, the disintegration of the Soviet Union and the imminent emergence of a common market in Western Europe are events of truly historic significance. These changes will have a profound impact on both the international relations and the world economy. Simultaneously, most developing countries have embarked on bold measures of reform in restructuring their economies and opening up to forces of competition, both domestic and foreign. All these changes certainly have an impact on the Indian economy.

India is passing through a historic moment on the economic front. The Eighth Five Year Plan is launched in the backdrop of certain strengths in the economy as well as certain concerns which have surfaced over the recent years. The government have taken new initiatives and bold decisions to reorient and restructure the economy to meet the challenges of the present economic crisis in the country.

Resource Generation

The above scenario necessitates certain imperatives in mobilising resources for higher education. They include avoiding duplication and wastage, increasing the efficiency of the system, optimising utilisation of the resources through pooling and sharing and the need for the universities to generate resources while maintaining intact their primary task of teaching, research and extension activities. The need for fund generation by universities is in the context of both financial autonomy and resources crunch. This implies an added role to the university system. This added role brings into sharp focus the need for interaction with other agencies.

Linkages Between Universities, Industries and R & D Organisations

Towards interaction and inter-dependence, one of the approaches is to forge strong linkages between universities, industries and R & D organisations. This linkage will result in : (i) pooling, sharing and optimising the use of resources, (ii) development of indigenous technology appropriate to our national priorities and resources, (iii) adapting the imported technology wherever needed for preparing the industries to meet global competitiveness, (iv) enriching teaching and research in universities with the component of practical and field experience, and (v) universities and R & D laboratories getting valuable clues for research orientation. The process of interaction will not only lead to mutual benefit of the partners but also contribute to national development.

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For realising effective symbiotic relationship between Universities, R & D Organisations and Industries, a Model is formulated (Annexure). The word 'University System' in the Model is meant to include also professional institutions of higher learning in Engineering, Technology, Medicine, Pharmacy, Agriculture, Management etc., and similarly the word 'Industry' may include any other related organisations and sectors of the economy.

To bring about effective interaction, there should be specific cells/units in the universities, R & D laboratories and industry to act as contact points and for coordination. Such cells/units in the universities can interact with the industry and other sectors to acquaint with their problems, to boost their confidence in the University's capabilities, to receive consultancy assignments and to coordinate with the concerned schools and departments of the University in executing the work. In the case of IITs, the idea of an Industrial Foundation is mooted. There is also a need for creation of a National Cell to promote and coordinate the linkages between the university, industry and R & D organisations. The interaction between university-industry-R & D laboratories will also help towards fund generation by the universities. Funds generated by universities should not be deducted from the grant given by the government. This would act as incentive for fund generation.

Universities must enter the country's industrial life and become a part of it and thereby become a partner in progress and a frontline organisation in science and technology and scientific and technological human resource development for the industry, it promoters and the entrepreneur as well as the technological trouble shooter for industry. It should also become a conduit between industry and scientists and technology experts in various fields in the country and abroad.

Consultancy

The universities/IITs and R & D laboratories may have their own strengths and deficiencies for consultancy. Coming together, they can cover up the deficiencies of each other with their mutual strengths and forge a cohesive and strong partnership for International Consultancy.

Joint educational International Consultancy could be offered, which may include institution building, establishment of specialised laboratory facilities, development of curriculae, organising continuing education programmes like seminars and short courses, joint research projects, faculty development and technical staff training. Through industrial consultancy, we can help foster closer interaction between the educational institutions and industry in the recipient country by sending our experienced faculty and scientists and assisting them in taking up industrial consultancy assignments and extending the specialised analysis and testing facilities available at the universities, institutes and national laboratories in India. Consultancy services could also be extended directly to industries abroad.

Greater efforts with widened scope are needed by all universities, the national laboratories and scientific institutions to help the Indian industry. The Indian industry should on its part build up more confidence in the national laboratories, institutions and universities and utilise their expertise and resources for technology innovation and development, technology transfer and adaptation, productivity improvement, consultancy etc. In turn, the requirements of industry will provide the base for R & D activities in the national laboratories and universities. Thus there is greater need for sysmbiotic relationship between universities, industry and R & D organisations.

Other Means of Resource Mobilisation

Some of the other ways and means of raising resources by universities for becoming self-reliant to the extent possible, for their recurring expenses are :

(i) By increasing the fees to more realistic levels,

(ii) By permitting to charge from foreign students a reasonable tuition fees in foreign exchange,

(iii) By increasing the obverhead charges on the outside funded sponsored project ,

(iv) By removing mess subsidy, if any, and

(v) By continuing education programmes.

Creation of a substantial endowment or corpus fund for each university could be explored. Revenue obtained from such funds can eventually be used to reduce the required support from the government for the non-plan expenditure.

The major users of the university output are the public sector organisations and organised large scale industrial and service sectors. Currently, the main users have very little contribution to the universities. It may be worthwhile to examine their stronger participation by asking them to contribute directly to the universities. In some of the developed countries such participation through levy of a cess on a group of industries or through endowments is common. On similar lines each university may be associated with a group of public sector/major industries who then will be required to contribute towards financing the related university departments/schools. A capital grant may be given by industry/public sector to the university corpus. For encouragement of such a grant suitable tax incentive has to be built by declaring all such contributions under personal income tax free.

Other sources by which the endowment can be built up are :

(a) Alumni endowments,

(b) Endowment donations from the individuals/trusts,

(c) Sale of patent right, copyright, royalties on R & D etc. Currently the revenue from these sources is almost negligible. Further, if a patent results from a project funded by a government agency then technically the patent rights are with the government agency. In such cases the patent right may be permitted to be retained by the university.

(d) Cess may be levied by the government on certain sectors of industry and funds given to universities specifically to encourage activities in the areas beneficial to those sectors.

(e) Donations from the international agencies and trust foundations whose aim is not in conflict with the university's objectives and/or national interests.

(f) Endowment grant from other countries with an explicit commitment to train specified manpower for them.

While the measures outlined above are for the creation of a corpus fund to provide financial autonomy to universities, it is advisable that they be permitted to raise dedicated funds for specified purpose from industry/individuals/alumni and international organisations to partly meet the developmental needs; for example funds for specific buildings, funds for library collections, funds for establishment of a research centre/research facility, funds dedicated to specific research programmes, and funds dedicated for scholarship, fellowship, chair, research grant, etc.

Currently while universities do accept funds for scholarship, chair etc., they do not normally accept funds for other purposes. In this country as well as abroad there has been a tradition of funds being accepted by institutions for all the above purposes. Generally, donor may require the building, library collections, programmes, scholarships, chair etc., to be named after him or somebody. This may have to be acceded to.

Management of these endowment funds will require high calibre of financial management as optimisation will have to be done with respect to interest, risk, capital gains and short term/long term perspectives. It will require that each university should have an independent management body for the trust/endowment to be managed by a set of professional managers and overseered by a group of public/government/industry representatives (trustees) who will be responsible for :

(a) Making sure that endowment received are in the interest of the university and the national interest,

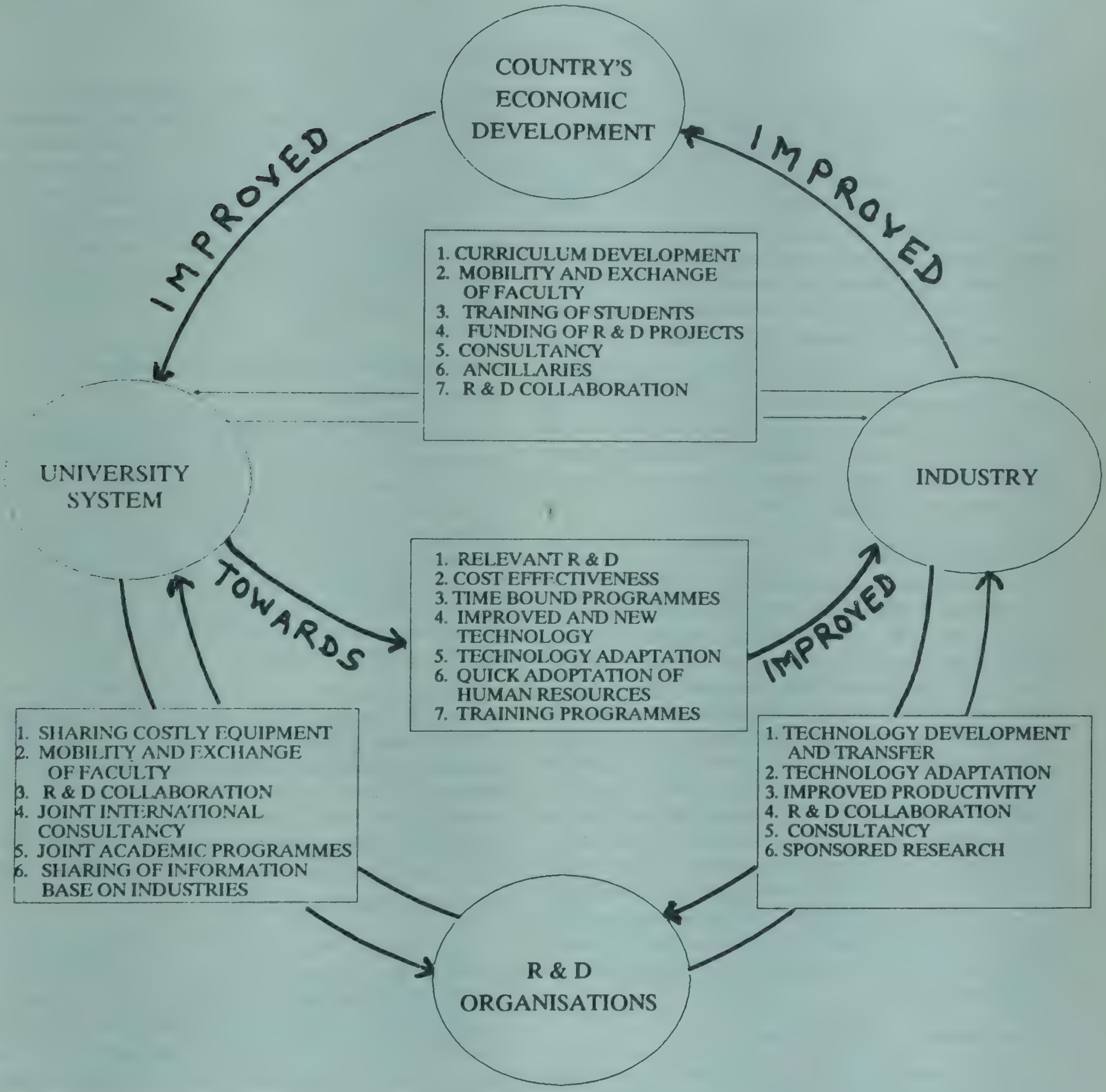
(b) Making sure that funds are invested to yield best possible return after taking into account risk, long term and short term perspectives and capital gains,

(c) Making sure that endowment received for development are utilized accordingly, and

(d) Receiving and encouraging such endowments.

The time has come that we have to make a beginning to change the culture of universities to gradually move towards becoming less dependent on government funding. The various measures and approaches suggested above are to be explored while taking cognizance of the differences in universities in terms of their status – State Universities, Central Universities, developed Universities, developing Universities and their local conditions. Depending upon the university's status, it has to appropriately pick up the threads for fund generation and move towards financial autonomy. Thus, the added role of universities for funds generation and to strive to move towards financial autonomy depends on their individual status and initiative. However, one cannot ignore the imperative need for becoming self-reliant in the sense of bridging the gap between fund requirement and the fund availability from the government.

SWAMINADHAN MODEL FOR UNIVERSITY -INDUSTRY - R & D ORGANISATION SYMBIOSIS


COUNTRY'S ECONOMIC DEVELOPMENT
IMPROVED
IMPROVED
1. CURRICULUM DEVELOPMENT
2. MOBILITY AND EXCHANGE OF FACULTY
3. TRAINING OF STUDENTS
4. FUNDING OF R & D PROJECTS
5. CONSULTANCY
6. ANCILLARIES
7. R & D COLLABORATION
UNIVERSITY SYSTEM
INDUSTRY
TOWARDS
1. RELEVANT R & D
2. COST EFFECTIVENESS
3. TIME BOUND PROGRAMMES
4. IMPROVED AND NEW TECHNOLOGY
5. TECHNOLOGY ADAPTATION
6. QUICK ADOPTATION OF HUMAN RESOURCES
7. TRAINING PROGRAMMES
IMPROVED
1. SHARING COSTLY EQUIPMENT
2. MOBILITY AND EXCHANGE OF FACULTY
3. R & D COLLABORATION
4. JOINT INTERNATIONAL CONSULTANCY
5. JOINT ACADEMIC PROGRAMMES
6. SHARING OF INFORMATION BASE ON INDUSTRIES
1. TECHNOLOGY DEVELOPMENT AND TRANSFER
2. TECHNOLOGY ADAPTATION
3. IMPROVED PRODUCTIVITY
4. R & D COLLABORATION
5. CONSULTANCY
6. SPONSORED RESEARCH
R & D ORGANISATIONS

NOTE :-

1. 'University System' includes professional institutes of higher learning in Engineering, Technology, Medicine, Pharmacy, Agriculture, Management etc.
2. 'Industry' may also include other sectors of the economy.

Rethinking the University Set-Up : Take Care of the Fundamentals

P.R. Dubhashi *

There is a feeling in our country that all is not well with the university set-up. Suggestions are made from time to time for its reform. However, these suggestions for reforms do not often go to the root of the problem and deal only with some of the external aspects without touching the inner core. The inner core consists of attitudes and outlook, the spirit and atmosphere, rather than mere organizational or procedural aspects. When the atmosphere is spoilt, even the best of organizational and procedural reforms are likely to fail.

An institution or organization will succeed if its mission and goals are clearly defined and all those working in that organization or institution understand them and are committed to their fulfilment. What is the concept of the University and in terms of the concept how could its mission and goals be defined?

Concept and Mission of the University

The university is essentially an association of teachers and students in pursuit of scholarship. The primary goal of the university is to promote knowledge and to disseminate it, and prepare the young people to enter in life to assume higher positions in various fields like science, technology, education, administration, business management and entrepreneurship. A university is rightly described as a temple of learning. Nehru expected the university to be an institution constantly engaged in search of the truth, adventures of ideas and the quest of knowledge. The frontiers of knowledge in all fields are continously expanding. We are facing veritably an explosion of knowledge and technology in all fields. Every university has not only to keep pace with the fast progress all over the world, but also to make its own contribution. These indeed are the lofty goals of a university.

From Sublime to the Ridiculous

Unfortunately, in practice the goals are not understood and there is the fall from the sublime to the ridiculous. The universities are treated as no more than mere teaching shops or factories for the award of degrees. Even these degrees are slighted, and are described as nothing better than toilet paper by some newspapers who should know better. This calumny is a consequence of the fact that very often the young people coming out of the university do not find ready employment. The phenomenon of educated unemployment is growing year after year adding to the frustration of young people and leading to the questioning of the very basic purpose of the university and its raison d'etre. This accusation persists despite the clarification often given that it is not the responsibility of the university to create jobs. Jobs emanate out of the functioning of the economic system and university is not incharge of this system.

Human Resource Development – the Goal of the University

Nevertheless, the fact remains that knowledge is not only the end in itself, but also a means to the end – the end being the welfare and progress of the society, the development of the economy and creation of a richer, better and fuller life for the people. It is therefore necessary that the knowledge produced and provided by the university is relevant. This creates a dilemma because the practical relevance of fundamental knowledge is not always apparent. Its relevance unfolds itself, tangibly or intangibly, over many years.

Nevertheless, the fact remains that the goal of the university, at a less sublime level, could be legitimately defined as one of human resource development – of producing qualified and educated personnel to hold higher positions in social and economic life of the country. That is why it is necessary to continously modify and diversify courses of higher education in the university to make them relevant to the needs of the society.

Delinking Jobs from Degrees

Surprisingly, despite the validity of the formulations made above, a point has been made that job must be delinked from the degree, and this point has even found its place in the new education policy. It is difficult to understand the rationale of this proposition. Jobs cannot be held by people who are not qualified and a degree, if it is worth anything, has to be given in recognition of the fact that the possessor of the degree is qualified and holds the necessary knowledge of the subject in which he is qualified. A person is offered a job if he has a degree which is found relevant to the job to be discharged. It is true that very often the knowledge given in the university would not be enough for the job and additional training has to be given but that training is superimposed on the foundation of knowledge which the university imparts.

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Those who ask for delinking the job from the degree would like the students to be recruited to their jobs immediately after the 12th year of education. Only those who want to pursue higher knowledge would then come to the university thereby reducing the load on the university system. This would be applied even to those who would desire to join the highest civil services of the country like the Indian Administrative Service, in the manner of recruitment to the military services. The protagonists of such a view do not seem to understand that the products so exclusively trained in the civil service school after 12th year are likely to lack the breadth and flexibility of mind which the university would provide rather than an exclusive school of administration. The narrow single track mindedness generated in the civil services school for school leavers is likely to be detrimental in the long run both to the quality of the civil services and the quality of the university education. This does not mean that for every job in government, a degree should be insisted upon. For lower and even middle level jobs, a degree may not be necessary. But for higher jobs requiring width of knowledge, everything has to be said in favour of a university degree as a qualification. The relevance of a university degree has diminished not because there is no relevance but because of the deterioration in the quality of knowledge imparted in the university academic programmes. It is said that the products of the university are unemployable. In that case the need is for improvement in the quality of the academic programmes of the university.

Commitment to Goal

This would only be possible if amongst all the constituents in the university, there is a single minded commitment to the primary goal of the university, namely, acquisition of knowledge and education by young people in various disciplines.

An organisation or an institution achieves its goals if there is congruence of outlook amongst all those who participate in the institution. If there is a discordance and working at cross purposes, then the goal is not accomplished.

Are all the components and participants in the university united in fulfilling the goals of the university? This is the basic question to which all concerned with university affairs should address themselves.

University as a System

The university is a system which consists of many components. These components consist of postgraduate departments and undergraduate colleges either directly run by the university or affiliated to it. There is a view that the entire system of affiliation should be done away with, and all the colleges should be run by the university. The other view is, that since the colleges are far too many, they cannot be run by the university and the colleges should be treated as autonomous bodies. Whatever be the merits or demerits of the organizational reforms suggested above, it has to be understood that these by themselves would not lead to the attainment of the objectives. Autonomous colleges would not serve any purpose unless there are autonomous participants who are committed to promotion and dissemination of knowledge. Otherwise autonomous colleges would only lead to greater discordance and working at cross purposes. They would prove counter-productive and lead to lowering of standards. On the other hand, in the system of affiliated colleges what is required is a closer interaction between the faculty of the postgraduate departments and the teachers in the affiliated colleges. This is quite feasible in small universities, but difficult or even impossible in larger and unwieldy universities with hundreds of affiliated colleges. Gajendragadkar Committee has recommended that a university should have about 30 affiliated colleges. With a bigger size diseconomies of scale set in. Gajendragadkar Committee's recommendation regarding the size of the university should, therefore, be implemented in a phased manner.

Discordance Amongst Participants

Whatever be the organizational set-up of the university, it is important that the system should work in a harmonious and mutually supportive manner. The participants in the university system, namely, teachers, students and staff should all be aware of the primacy of the goals of the university and should possess single minded dedication to the cause for which the University stands. Universities fail to achieve their goals, and indeed often become goalless, because the three groups of participants perceive their goals as contrary to those of the university and place their goals above the basic aims and objectives of the university. This puts the three groups of participants in antagonistic relationship with the university and with each other. It is often said that the students do not study, the teachers do not teach, and the karmacharis do not work even though all of them are dependent on the university and are duty bound to promote the cause of the university. However, the fact remains that they do not see their role in this manner and go about setting their own goals which are contrary to the goals of the university. This is the tragedy of many universities and of many organizations in our country.

Deterioration of Teachers and Students

The teachers often run after their own privileges, forgetting that a university teacher today is a very privileged person with fairly satisfactory UGC scales, security of tenure, freedom of working and little load of work as compared to persons in other walks of life. A profession in which pursuit of knowledge and teaching is a goal in itself, is a most enjoyable profession where work is its own reward and yet it is a sad spectacle to see some teachers wanting to do everything else except engaging themselves in their main occupation, indulging in university politics and politics outside, running parallel coaching classes and making a fast buck, or all the time running after greener pastures elsewhere neglecting the work in the university. It is this which gives a death blow to the very basic purpose of the university. The neglect of teaching and scholarship by the teachers affects the students. If the students find teachers neglecting their teaching studies, and scholarship, the students whose lives teachers are expected to mould, turn cynical and the bonds between the teachers and students are snapped. Students left to themselves then lose all sense of values and indulge in all kinds of anti-social activities.

In this, they are often encouraged by the foul atmosphere around. The students often see themselves in the role of successful but unscrupulous people in the society who include power hungry politicians, blackmoney businessmen and corrupt civil servants. The cinema and the mass media depicting unruly and unsocial behaviour create in the young minds a high degree of perversion and even recklessness. It is one of the objectives of the university to create a sense of values. But when these values are subverted in the society at large, university students get misled and assume that the university is also a place of a peverted value system.

In this, the students are held to ransom by some unscrupulous elements. These are the professional student leaders. The latter do not take their studies seriously and consider the student leadership as a stepping stone to politics. Sometimes even teachers encourage these elements by resorting to the short cuts such as getting the students on their side by all manner of non-academic behaviour including questionable evaluation of the performance of the students.

When such wrong attitudes develop, they make a mockery of all academic procedures for establishing standards. The rules insist on minimum attendance and yet students do not often attend lectures. And in the prevailing permissive atmosphere, no action is taken against them. Even minimum amount of reading is not insisted upon. The students miss the university classes and resort to coaching classes outside. New methods of teaching and evaluation are stoutly resisted. Methods such as assignments, self studies, tutorial work, etc., require a more intensive interaction between teachers and students in academic work. But all this is avoided. Reforms in teaching and evaluation are not possible without proper attitudes on the part of teachers and students.

University Administration

The role of the administration and the administrative staff is to support the academic activities. Often this is forgotten and the administration gets the better or academic requirements. The university bureaucracy is sometimes even worse than the bureaucracy in the government. Often the university is loaded with a set of statutes and ordinances which rigidify the functioning of the university. It is forgotten that statutes and ordinances are only a means of promoting academic work, and not an end in themselves.

Actually, much of the university work can be done on the basis of proper understanding of the goals of university by all concerned and objectivity of a high degree in perceiving the goals and working for realising them. If teachers lack objectivity, then the evaluation process loses its credibility and mere statutes and ordinances cannot restore the credibility.

The karamcharis or the staff instigated by outside political elements often go on strike on the slightest pretext obstructing the working of the university. On the other hand, the academicians always do not understand the importance of administration and tend to neglect it. Without smooth coordination between administrative work and the academic programmes, the university cannot work smoothly. The university ought to evolve its own administrative procedures for speedy and efficient discharge of the various functions of the university and the staff needs to be trained in such administrative work. The academic and administrative wings of the university should not present a dichotomy but a unity.

University Bodies

The work of the university takes place through the university bodies such as Syndicate (Executive Council), Senate (Court), the Academic Council, Boards of Studies, Planning Board, Finance Committee, etc. The functions of these bodies are laid down in the university statutes and ordinances. Unfortunately, some of the older University Acts and even some of the new University Acts are full of anomalies. It is these which breed academic politics. The university bodies constituted under the older acts try to behave in the role model of political institutions. If there is a disorder in the Legislative Assembly, why not have it in the Senate? If there is lobbying in the Assembly, why not in the university bodies? It is forgotten that democracy is not the only method and it does not apply to institutions whether civil service, military and university where other principles are more relevant and appropriate. In any case the core of democracy is reason, participation and discussion and not disorder, log rolling and intrigue. If appointments to the university bodies through a process of elections leads to politics and disharmony which impedes the working of the university, it is high time that the scope for elections is reduced if not altogether eliminated. This applies to student bodies also. If the elected students' bodies indulge in mere politics rather than promoting healthy co-curricular activities for all round development of the student community, then it is as well that the method of elections is replaced by nomination of meritorious students.

Discipline

The upshot of all this is that without a modicum of discipline and dedication on the part of all concerned viz. students, teachers and staff, the university cannot achieve its purpose. The discipline in a university cannot be imposed through use of force. It has to be a self-discipline, and self-discipline can only be the product of a healthy atmosphere.

A university is an academocracy and not just a democracy. It is self-governing institution in which all elements viz. the Vice-Chancellor, the Registrar, the administrative staff, the academicians have to play their role in an objective and impartial manner. The university should be wholly free from interference of the government and politicians, and should have the dignity of an autonomous self-governing institution.

Financing

The financing of higher education has become a serious problem in the context of the financial crunch experienced by the state and central governments alike. Higher education, all along, had been heavily subsidised by the government. Consequently, a feeling had developed in our country that the higher education should be made available at only a minimal cost, and it was everybody's right to have access to higher education. Persistent criticism about the deteriorating quality of higher education created a perception that there was not much value in higher education. What is not of much value should not also cost more. Thus whilst students and their parents are prepared to loosen their purse-strings on a widening range of material goods of life, and in recent years more specially on entertainment in all forms, when it comes to paying for higher education, there is a reluctance to pay. Middle class parents put up with heavy fees on convent and public school education for their children, or on coaching classes. But the payment to the universities or colleges should be only a token amount, never keeping pace with rising tide of inflation reflected in the higher dearness allowance paid to teaching and non-teaching staff engaged in higher education.

This basic perception that higher education can be cheap has to give way to the acceptance by all concerned that it is expensive and has to be paid for. The "*Gurudakshana*" has to be sizeable. The fee for higher education must have some relationship to the heavy expense at which it is provided. The Maharashtra State woke up after many years and suddenly raised the fees leading to violent demonstrations by the students and their supporters all over the State which even took an ugly form. But these self-righteous protestors did not wait to find out the cost of higher education as compared with the amount spent by these very students over material goods and possessions.

Maybe the rise in fees has to be phased over a period of time, but it cannot be token. It has to be substantial. In particular, apart from professional education, some of the specialised departments of higher education could also charge substantial fees. These would include departments of Management Studies, Computer Education or Biotechnolgy whose products are in great demand in the market. If the students have difficulty in paying fees, then loans should be made available to them from the banks on concessional terms, specially to students from the economically weaker sections of the society. The loan could be repaid by the students during their first years of employment, after they leave the portals of the institution of higher education. This is indeed a good system, and eventually much of the cost of higher education could be paid through this revolving loanable fund made available by the banks to the students for higher education.

Pending the availability of adequate resources through fees, the state has to bear the bulk of the budget – both capital and maintenance. The universities are established under an Act of the Legislature and hence the government has to assume the responsibility of supporting them and yet this commitment is often forgotten. Government takes sometimes a niggardly attitude in supporting the institutions of higher education. They try to evolve some 'pattern' of grant-in-aid assistance to the universities. However, the grant-in-aid formula applied to a charitable or welfare institution has no relationship to the grants to be given to the universities which have to be treated as mandatory in character. The grants should fully support the maintenance of the university. Having set up the university the government cannot escape its financial responsibility. The release of grants is unconscionably delayed, thereby seriously hampering the working of the university. Often the university officials have to face the discomfiture and humiliation of repeatedly approaching even minor officials in government to get the grants released. This is derogatory to the dignity of the university. It is the duty of the government and the departments concerned to ensure timely and orderly release of instalments of budgeted grants.

While there should be firm financial support from the government and fees payable by students must be of a adequate quantum, universities on their own part could generate their own independent resources by developing several "profit centres". These would include the library and laboratory services often made available to the outside institutions and individuals. These services should no longer be made available gratis or at nominal rates applied to teachers and students but at a substantially high level of fees. Secondly, the universities could undertake substantial amount of consultancy work and applied research work for business, industry and commerce. This could earn the university substantial income. Unfortunately, our business and industry is not much interested in R & D and does not have foresight of the gains which it could derive from a long term collaboration with the university and institutions of higher education. Thirdly, the university facilities like Guest House and Conference Hall could be made available to hold conferences and seminars by management and professional bodies which should not hold them at five star hotels at heavy cost. Fourthly, business, industry, philantropists from community at large could give munificent donations to the university. The concept of "educational foundation" is not very well developed here as in USA where several universities are supported by private philantropists. The example of Sir Hari Singh Gour who gave a munificent donation to establish the Saugar University is perhaps an exception.

Amongst potential donors are the old students of the university. The students do not have the feeling of obligation to their alma mater. That way the students do not think it fit and proper to make donations to their university after they start working and earning. It is worthwhile establishing alumni associations through which the idea of extending support to the university could be developed.

The finances of the state government are supplemented by the University Grants Commission under their specialised schemes. But these are only marginally supportive to the finances of the state universities.

The concept of the University Grants Commission itself deserves to undergo a change. It is today partly a grant giving body and partly a body incharge of setting satisfactory standards of higher education. Both these functions are discharged very inadequately. The constitution and functioning of the University Grants Commission needs a second look. Firstly, it should not be an aloof bureaucratic agency but must be of the nature of a confederation of Indian universities themselves. This would mean some kind of merging of the office of the Association of Indian Universities and the present University Grants Commission. Secondly, at present there is a proliferation of councils in various professional disciplines like the Indian Medical Council, Indian Pharmacy Council, Bar Council and All India Council of Technical Education. These councils are independently responsible for setting standards in their respective disciplines but are conversant with the university system. The proposed confederate body of the university should have within it all the councils which have proliferated over time. If the basic concept is accepted, then the constitution and functioning of the confederation could be worked out.

In this exercise, we may draw upon the good points of the Constitution and working of the British University Funding Council (UFC). The Council's general aim is the maintenance and development of universities as high quality and cost-effective institutions providing for the advancement of knowledge, the pursuit of scholarship and the education of students, thereby playing their parts in meeting national needs. Specifically, the Council encourages universities

- to identify and develop their strengths and opportunities, so that a growing range of choices is provided to students, organisations and others.
- to maintain and enhance the quality of teaching and encourage further flexibility in provision.
- to improve access to initial and continuing education for mature and part-time students, and for students from a broader range of social, educational and ethnic backgrounds.
- to maintain and enhance high quality research and scholarship, the fruits of which should be increasingly accessible.
- to exercise their autonomy, with the minimum of UFC involvement in universities' affairs, while remaining accountable for the use of funds provided by the Council.
- to enhance their funding from an increasing range of sources, without prejudice to the level of government support.
- to develop further their management capabilities, ensuring maximum exploitation of new opportunities and the efficient use of resources.
- to increase their contribution to industry, public services, the professions and other areas of society through teaching, scholarship and research.
- to expand their roles as regional and local resource centres.
- to increase collaboration with other educational institutions where this is of mutual benefit or in the national interest.

Conclusion

To conclude, what is required to tone up the university set up is taking care of the fundamentals.

Firstly, there has to be an all round appreciation that the goal of the university is pursuit of knowledge and scholarship. Examinations and awards of degrees are only incidental to this main goal.

Secondly, the functioning of the university should be based on cooperation and not confrontation between different participants in the university viz. the teachers, students and staff.

Thirdly, a university has to be wholly autonomous in character, without any interference from government or politicians. The government should realise the need for academic autonomy and at the same time proper funding of the university. Till the university builds its own resources, they should give full financial support to the university without attaching strings. At the same time, a university should give a guarantee of dedicated performance and satisfy the government, the legislative assembly or parliament and indeed the society at large that the university is pursuing its mission with a sense of dedication.

Role of Self-Financing Colleges in Our Educational System

T. Ramesh U. Pai*

Education has engaged the attention of the nation for many years. Unfortunately, it is observed that those who do not know much about education, speak endlessly about it; whereas those who are real experts, who wish to improve the educational standards among our people, are not given the chance to have their say. During the period 1937 to 1990, there have been as many as eleven major statements on Education Policy (ten of them after India became a Republic) not to speak of several others made in the Parliament and State Legislatures, plan documents and public debates. Education has been the most debated issue, but the outcomes are debatable. The National Policy on Education (NPE) 1986 was a landmark decision by any reckoning. A lot of thought went into its formulation and the draft was discussed in detail at various levels throughout the length and breadth of this country.

The NPE 1986 highlighted the importance of universalisation of primary education which, it may be recalled, is a constitutional obligation (vide Article 45). Four decades later, the universalisation of primary education still remains an unfulfilled promise. We are still inching our way through a maze of problems. The reasons for this sorry state of affairs are many. With poverty rampant among the people, many parents, particularly in rural areas, withdraw their children from school and get them to perform tasks which can supplement their meagre income. They regard education as a pastime of the affluent. Another important reason for the poor state of primary education is that in its present form it has lost its relevance. While a few regard it as a key to their future career, many treat education as a blind alley – a road that leads nowhere. To further complicate issues, most of our primary schools are in a pathetic condition. The buildings are poor, black boards non-existent in many schools and even the requisite number of competent teachers sadly missing. It is extremely important that the links between the school and society be established on firm lines. Ours is the second richest country in the world in terms of human resources. We can tap this huge reservoir for the benefit of the nation. Although the NPE aimed at involving 10% of the student population in the vocational stream by 1990, it is deplorable to note that not even 5% of the students have been brought into the stream of vocational education so far.

While developing countries like Uganda, Kenya and Thailand have been investing 15 to 23% of their budget outlay on education, India has been investing hardly 2% of its totoal expenditure on education. It was at the instance of the Kothari Commission's recommendation that the Government earmarked 6% of the budget outlay for education. Unfortunately, our priorities have gone completely astray. While primary education which is to serve as the enduring base for our educational pyramid is sending distress signals, the Government is spending 85% of the outlay of the educational budget on institutions of higher education. In spite of the reservation policy, it has been established beyond doubt that higher education in India is mostly availed of by the top 30% of the income groups. Thus we have the enigmatic situation where the poor tax payer who bears the brunt of indirect taxes pays through the nose for the higher education of the rich. We would do well to recall the message of Gandhiji, when he said "I am opposed to all higher education being paid for from general revenues".

In his book, "Education Commission and After" J. P. Naik has made the following observation : "There is very little understanding about the price that society has to pay to create a national system of education. Very often people believe that this price is in terms of financial investment. The more significant price that society has to pay for education includes the investment of thought, of dedication, of sustained hard work by teachers, students, educational administrators and others, of courage to make hard and unpleasant decisions and above all of a willingness to change society".

Ever since 1950 higher education in India has had an extremely fast growth rate. India has now 3rd largest higher educational network in the world with 198 universities and over 7000 colleges, with a total enrolment of over 40 lakhs and an annual expenditure of about Rs. 100 crores. Higher education is being subjected to higher pressures of demand and consequently bigger gaps are anticipated between expected requirement and the possible allocation of resources from public funds. Some major decisions are imperative on the financial front.

Financial Implications

The policy makers in India do not seem to have sufficiently examined in advance the financial implication of expansion and the working out of appropriate method of financing education.

With the Government finding difficult to allot more funds, a financial crisis is looming large in the higher education sector. It is faced with the dilemma of satisfying the growing aspirations of the youth for university education on the one hand and the Government's inability to meet it with its meagre resources on the other. The tapering off of private (non-Governmental) resources for the development of higher education has resulted in the system depending on the Government increasingly for meeting a major portion (about 80%) of its expenditure. The process of expansion has thus been accompanied by a widening gap between public and private funding of higher education.

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A realistic approach to the financing of higher education has yet to take shape, although the inherent limitation of the existing pattern have been known from time to time. The whole sector of higher education needs to be stimulated so that it becomes really "higher" in terms of quality. It has to be noted that the present system of financing higher education involving a substantial subsidy which is extended indiscriminately to both the privileged and the underprivileged, is highly inequitable. Many of the seats in higher educational institutions funded by Government are appropriated by those belonging to the well-to-do sections of society, with the result that the benefit of subsidy has mostly gone to them.

Self Financing

In a situation of resource scarcity there is an urgent need for looking at effectiveness of higher educational expenditure on different items, apart from salaries. It is in this context that the concept of self-financing gains importance. Manipal has been a pioneering centre for self-financing in higher education and has achieved a remarkable degree of success. It was the vision and courage of the late Dr. T. M. A. Pai, who started a Medical College against all odds in order to make medical education available to those who were denied admission to Government institutions. He had very clear and farsighted ideas and these ideas are still being put into practice even today. His approach was that students who are willing to pay for their education should be provided the facility to pursue the line of education of their choice. In his wisdom he insisted on minimum qualifying marks (high first class) before a student could be considered for admission even if he is willing to pay for it.

Both the Medical and Engineering Colleges under the Manipal Academy of Education have been outstanding centres of specialised education and the results have been most gratifying. Today we have alumni from both these institutions located in various parts of the globe pursuing their profession with a high degree of competence and confidence. They are grateful for the opportunity given to them to acquire professional qualifications and today, the communities in which they practise around the world are grateful to them for the excellent services being rendered by them.

The success of the Manipal Experiment should really be a shining example to the rest of the country in encouraging well managed self financing in education. Unfortunately, proper lessons have not been taken from this great experiment and positive benefits have not been derived by the Indian community.

There has been a great deal of criticism about the fees that are charged by self-financing institutions. The criticism comes from those who are ignorant of the true cost of education. We do not get a single paisa from the Government. This means that we not only have to take care of the running cost but also the heavy investments required for providing the necessary facilities by way of buildings, equipments, research facilities, and supporting infrastructure. This only shows that the critics are unaware of the high costs of education which are hidden from view in Government funded institutions because the burden is quietly passed on to the tax payers. The unfortunate part is that this very tax payer is unaware of this burden and at the same time he points an accusing finger at the self financing institutions which are managing their affairs competently, with their own resources, with financial inputs from willing parents who are prepared to invest for the education of their children because of their faith in these institutions.

A Few Bad Apples

It is true that in this confused scenario there are some institutions which do not care to maintain the required standards, and whose intentions are not quite honourable; but then, a few bad apples do not make the whole sackful rotten. There are people who are after money grabbing. I agree it is money grabbing;

1. If you do not provide good education with competent teaching faculty and good infrastructural facilities;

2. If you do not provide equipment which is the best and the latest; and

3. If you do not maintain high standards.

But if you do, then that self financing institution should be given the right encouragement so that it will continue to provide a high standard of education consistently in a sustained manner.

I also believe that those who cannot afford to pay, but who are bright, need not be denied the opportunity of studying in these institutions. They can be given loans to meet the cost of their education and interest should be paid by the government during their period of study. The student after he passes out and gets a job, he takes over the burden of the loan along with interest. This system which is followed in the USA provides a wholesome combination of opportunity (through loan facility) with accountability.

Instead of meddling constantly in the running of educational institutions, the Government would do well to excercise coordination and control at the apex level, weed out inefficiently run institutions and promote the healthy advancement of educational activity in the country. In the present context of the liberalised economy, only well managed self financing educational systems can make the most effective contribution to the nation's development.

THE TEACHER

Justice A. R. Lakshmanan of the Madras High Court delivered the Convocation Address at the fifth annual convocation of the Alagappa University, Karaikudi. Discussing the role of the teacher, Justice Lakshmanan observed that, "A teacher removes and dispels the darkness in the students' mind. It is the teacher who enlightens the students and moulds their future. Therefore they are entitled to great respect and reverence." Excerpts

Education is very important and without education, there cannot be progress and growth. The real meaning of education is 'learning'. This learning is necessary for every one of us without any distinction of caste or creed in order to render useful service to the nation. The Founders of our Constitution of India have also laid great stress on education by providing in Article 45 that the state should endeavour to provide within a period of ten years, from the commencement of the Constitution, for free and compulsory education for all children until they complete the age of 14 years. Though the idea of directive principles has been borrowed from the Irish Constitution, yet they have very great relevance to our country. Dr. Ambedkar had said that failure to implement the directive principles would result in the party in power standing to lose. It cannot be gainsaid that the directive principles contained in Article 45 of the Constitution of India have not been fully implemented although many decades have elapsed since independence.

One of the very urgent needs of our society is to educate people of the backward, most backward classes, scheduled castes, and scheduled tribes. The Constitution with all its appropriate provisions for the uplift of scheduled castes and scheduled tribes by grant of concessions is a meaningful inspiration for the educationists of today.

The authors of the Constitution honestly believed that within a time limit of ten years, the problem of educating the underprivileged would have been solved. But the problem has assumed greater proportions than what it was to start with creating in its wake disharmony among the various castes, communal frenzy, casteism, and the like. However, it is in the hands of our educationists to find a solution to the problem of educating the downtrodden.

I appeal to you affectionately to look upon education as an unending pursuit. As a Judge, I am tempted to bring to your notice the story of a ninety year old retired Judge whom President Roosevelt once visited. Roosevelt found the Judge reading Plato and asked him why he was reading Plato at that ripe old age. The nonagenarian replied placidly "To improve my mind, Mr. President". It is this spirit of enquiry, this yearning for truth that should pervade the younger generation. For achieving this great objective, universities must really be liberal in structure and character.

The Conference of Vice-Chancellors organized by the University Grants Commission and the 66th Annual Meeting of the Association of Indian Universities held at Thiruvanathapuram recently have talked openly and boldly for the first time, about the cancer that is eating into the vitals of the university education system in this country. The real cure for the malady is to give the universities complete autonomy. Look at the academic bodies of any University in the West. You will find only academics in these bodies, nobody else. With greater university autonomy, you see our institutions blossoming and radiating fragrance throughout the length and breadth of our country.

I am sure that the Degree holders of this great Institution would contribute to the growth of material and moral wealth of our nation. It is hard work and total dedication which bring success. I am sure that all of you would turn out to be good and useful citizens. If our nation has to march forward, it is absolutely essential to have good Scientists, Technologists, Philosophers, Jurists, Doctors, Lawyers, Judges, and Teachers. I have no doubt in my mind that the students of this magnificent institution would undoubtedly achieve great things in their life and I wish them all success in all their endeavours. It is also my duty to remind that the students should not forget their teachers. It is their duty to set apart a portion of their earning for the education of the underprivileged. I would suggest that a trust could be founded by the old students of this great University, who by contributing according to their might to a common fund, would help for the education of economically poorer sections of the society.

A teacher removes and dispels the darkness in the students' mind. It is the teacher who enlightens the students and moulds their future. Therefore they are entitled to great respect and reverence. It is disheartening to find that of late there is a growing tendency among the teachers to organize themselves collectively and adopt agitational methods to coerce the persons in authority to concede to their demands. I would appeal to the respected teaching class to set a good example for the students to emulate. It is also the responsibility of the University and persons in authority to endeavour to keep the teachers above wants.

Unfortunately the subject of education has become a great pasture of litigation of Court of law. Students and managements of unrecognised educational institutions enter the law Courts instead of spending their time usefully in the classrooms. It is also true that some unscrupulous persons who do not really evince any interest in the cause of education, are making the educational institutions as money spinners. What I mean is that the people start the educational institutions without obtaining necessary recognition from the Government and the University concerned. It is the duty of everyone of us to prevent such exploitation by money spinners in the fields of education.

Our great nation is yet to achieve complete literacy and complete success in the field of education. I am confident that the teachers and the students of this University will play a vital role in the building up of our nation as a prosperous one. It is said in the Upanishads :

> Don't do all things which your teachers do – whatever blameless acts they do follow them but not others."

The worthy Teachers of this University should by their dedication produce very many genius who will attain distinction and greatness in their fields of work.

CALENDAR OF EVENTS

Proposed Date of the Event	Title	Objective	Name of the Organising Department	Name of the Organising Secretary/ Officer to be Contacted
October 26-31, 1992	Third IAU Mid-Term Conference to be held at Alexandria, Egypt	Theme: Adaptation of University Management Structures and Strategies for New Requirement	International Association of Universities (IAU), France	Dr Franz Eberhard, Secretary General International Association of Universities, 1, rue Miollis, 75732 Paris Cedex 15 France
November 9-13, 1992	16th World Conference on Distance Education for the Twenty-First Century	To give a view of the aspects of development in Distance Education in the Twenty-First Century	International Council for Distance Education, in cooperation with Sukhothai Thammathirat Open University (STOU), Thailand	Mr. Bruce Scriven, Program Chair -16th World Conference of ICDE, Queensland University of Technology, Locked Bag No.2, Red Hill Queensland 4059, Australia
November 25-30, 1992	IAEWP 6th World Congress	The Congress will deal with (1) Social Welfare, (2) Health Care, and (3) Educational Needs	International Association of Educators for World Peace (IAEWP) in co-operation with Social Action Movement, Malta	Dr. Suryanath Prasad, International Co-ordinator, IAEWP 6th World Congress & World President, IAEWP, Janta College of Education, P.O.Box 113, Chandrapur-442401 Maharashtra, India
December 28-30, 1992	All India English Teachers Conference	Theme: Modern Trends in English Literature and New Literatures in English	Indian Association of English Studies	Prof. K.Venkata Reddy, Professor of English, Sri Krishnadevaraya University, Anantapur-515003
December 14-16, 1993	1993 Annual Conference of the Society for Research into Higher Education	Theme: Governments and the Higher Education Curriculum: Evolving Partnerships	Society for Research into Higher Education, London	Prof. Tony Becher, EDB, University of Sussex, Falmer, Brighton BN1 9RG

Academic Counselling in Distance Education

A National Workshop on Academic Counselling in Distance Education was organised at Dr. B.R. Ambedkar Open University, Hyderabad. Sponsored by the Commonwealth of Learning, Vancouver, Cananda, this was the first workshop organised by the Mobile Training Team constituted by Commonwealth of Learning in 1991, as a core group for training of Distance Educators in India. At present, the Mobile Training Team consists of four members drawn from four Open Universities in the country, namely, Indira Gandhi National Open University; Dr. B.R. Ambedkar Open University; Kota Open University and Yashwantrao Chavan Maharashtra Open University.

The central theme of the workshop was "the theory and practice of Academic Counselling in Distance Education". 13 topics related to different aspects of academic counselling were identified for intensive discussion in working sessions. Provision was also made for Group Work in the workshop. Four subthemes namely (1) Identification of Student Needs and Problems; (2) Assessment of Assignment Responses; (3) Academic Counselling for Science, Technical and Vocational Programmes; and (4) Monitoring and Evaluation of Academic Counselling were identified for Group Work.

Two Resource persons initiated the discussion on each sub-theme. The three broad areas covered in the discussion on each sub-theme were: (a) concepts and present practices, (b) emerging issues, and (c) recommendations for action. The experiential learning method was adopted in the workshop.

Inaugurating the workshop Mr. P.K. Doraiswamy, Chairman, A.P. State Council of Higher Education emphasised the importance of distance learning. He raised the following issues for consideration by the participants : (i) Areas of Distance Education : conventional vs new areas; (ii) Finances : Self-financing vs subsidized system; (iii) How to maintain standards in open universities; (iv) Need for research in the area of educational technology; (v) Need for customer-centred approach to counselling; (vi) How to provide counselling according to individual needs; (vii) How to evaluate counselling – any indicators?; and viii) Need for innovations in the development of course materials. He also felt that a model counselling programme should be developed as a training tool for the orientation programmes of academic counsellors.

Prof. R.V.R Chandrasekhara Rao, Vice-Chancellor, Dr. B.R. Ambedkar Open University, who presided over the inaugural function and also gave the valedictory address, observed asunder:

* The most important function of distance education was the contact between student and counsellor;

* The Commonwealth of Learning succeeded beyond measure in coordinating, promoting, encouraging and arranging exchange of expertise and also money and material;

* The aim of Mobile Training Programmes was that these programmes would increase the number of trained counsellors, and as ‘wider and wider the circle expands’, perhaps finally, as many as that are desirable would be covered;

* The survival of the open universities very much depended on study centres and with this spirit the workshop was organized.

* Training programmes by Mobile Training Team could be strengthened with the help of the Commonwealth of Learning, Indira Gandhi National Open University, State Government and with the possibility of generating our own resources.

* Action Plan of Mobile Training Team conceived 3 or 4 workshops – one of the proposals was that there must be an interaction between Vice-Chancellors of Open Universities and Mobile Training Team.

* There were problems relating to the assignment marks for final evaluation. It should be overcome by giving weightage to assignments in the final award of degrees.

* Standardization of nomenclature was very important to understand each other and to make the dialogue much more comfortable.

* Dr. B.R. Ambedkar Open University was going to acquire a mobile van to take science practicals to the doorsteps of students.

* Distance Education Council will discharge the role of the maintenance of standards in distance education and the funding agency of open universities.

* The Commonwealth of Learning should play the role of a catalytic agent by helping in the conduct of many more workshops on different aspects of distance education.

Mr. Bruce White, Training Consultant, Asian Programmes, Commonwealth of Learning, in his remarks observed that to realise the goals of distance education the ‘support’ should come from Minister’s level, from Vice-Chancellor’s level and down through all of the levels until it reached the student. He also observed that ‘support’ was a dynamic process and it involved the commitment at all levels.

Prof. V.S. Prasad, acted as Programme Coordinator of the workshop.

Some of the recommendations and observations that emerged out of the discussion in the workshop were:

(a) The workshop provided an opportunity for sharing the cross-institutional experiences of all open universities in India. In view of the diversity of the situation and differences in practice, it was necessary to provide many more such opportunities for exchange of experiences of open universities in the country on different aspects of distance education.

(b) For better understanding and effective communication, it was desirable to evolve a common terminology for describing the similar processes in the distance education system. For example, Indira Gandhi National Open University was using the term Academic Counsellor and State Open Universities were using the word Counsellor for a functionary who was more or less entrusted with similar responsibilities. It was desirable to use the term Academic Counsellor in all open universities.

(c) It was desirable to develop a check list of functions of Academic Counsellors, with priorities specified.

(d)In the identification of Academic Counsellor, the philosophy of 'openness' should be followed. Ability to perform should take precedence over paper qualifications. The experiment of Yashwantrao Chavan Maharashtra Open University, like "Prayog Parivaar" – a sort of an extended family where people get together to exchange ideas and benefit from each other's experience - deserved careful examination for adoption by other open universities.

(e) Management Information System should be developed for effective monitoring and evaluation of academic counselling.

(f) The assignments should be given an important place in distance education. Except in Dr. B.R. Ambedkar Open University, in all other open universities, performance in assignment is taken into account in the final award of degrees. The weightage may differ from programme to programme. Ambedkar Open University also should consider seriously the desirability of giving weightage to assignments in the award of degrees.

(g) The open universities may have to create their own "minimum" physical infrastructure facilities at study centres. For Science practicals, the feasibility of establishing regional open university laboratories deserved serious consideration. The mobile laboratory proposed to be created at Dr. B.R. Ambedkar Open University with the assistance of Commonwealth of Learning along with the Mobile Training Team of Academic Counsellors was considered a novel method of taking the lab to the doorstep of students.

(h) Participants felt that the pattern o full-time 'Core Staff' at study centres adopted by Dr. B.R.Ambedkar Open University deserved favourable consideration by the open universities.

(i) Flexible and decentralised administrative structures were necessary for effective academic counselling.

(j) Participants felt that regional centres played a very important role in the delivery system in distance education. Dr. B.R.Ambedkar Open University also may consider the desirability of establishing regional centres.

(k) Training of Academic Counsellors should be considered as an essential requirement. Every Academic Counsellor should undergo a minimum of one day refresher/orientation/induction programme every year. The Commonwealth of Learning and Indira Gandhi National Open University should take the responsibility of preparing training materials. Every open university should create a unit and identify a senior functionary with responsibility for planning and organisation of training programmes.

Shelley Bicentenary Celebrations

The Postgraduate Centre of Sant Vinoba Bhave University at Hazaribag celebrated the two-hundredth birth-centenary of the great 19th Century English poet Percy Bysshe Shelley. Dr. K.K. Nag, Vice-Chancellor of Ranchi University, inaugurated the Celebrations while Dr. A.K. Dhan, former Vice-Chancellor of the Ranchi and Patna Universities presided over the function. The function coincided with the opening of the newly established Sant Vinoba Bhave University. The founder Vice- Chancellor Dr. (Miss) Vinodini Terway, lighting a five-wicked lamp, marked the synchronisation of three functions at the same time – P.B. Shelley Bicentenary celebrations, celebrations observing the completion of the two decades of P.G. Centre's existence and formal opening of the Sant Vinoba Bhave University at Hazaribag. She expressed confidence in her full dedication to the cause of building up an ideal university and elicited public co-operation by exhorting the politicians, teachers and students to keep petty tangles and foibles off the institutions of the university as also to invigorate the cause of meaningful higher education.

In his inaugural address Dr. Nag paid glowing tributes to P.B. Shelley in whom he identified a powerful lyricist-cum-crusader against the unwarranted evils of authority and conventions as well as a prophetic explorer of the bliss of love, beauty and truth. He also welcomed the establishment of Sant Vinoba Bhave University and wished it a very bright and purposeful future.

Dr. D.D. Baskiyar, an acknowledged Shelley-expert and scholar of renown and the Head of the Department of English, Ranchi University, delivered the keynote address on various aspects of P.B. Shelley's poetry establishing his claim to greatness and immortality. Earlier, Dr. S.N. Sinha, Head of the Department of English at the P.G.Centre, Hazaribag, introduced Shelley's life and work, and Dr. S.P. Mishra, in his organising Secretary's report, recalled how the idea of celebrating the bicentenary celebrations was conceived and enthusiastically responded to by all concerned.

In an exclusive session devoted to the evaluation of the influence of P.B. Shelley's poetry on the poetry of the Indian languages, Prof. Nageshwar Lall, a retired Professor of Hindi and a renowned critic of Hindi poetry, presented a very scholarly paper on 'Shelley and Chhayavad", beautifully tracing how the Hindi Chhayavadi poets had amalgamated in their poetry, all that was bright and brilliant in Shelley's poetry, keeping off from the negative aspects that made the poet controversial as a man and poet.

In his presidential address, Dr. A.K. Dhan, elightened the listeners on the pitfalls leading to a misunderstanding, in the body of Shelley's poetry and exhorted both his admirers and detractors to read his poetry again and again.

The students of the Dept. of English, P.G.Centre' presented recitations of Shelley's famous songs like the 'Cloud' and 'To a Skylark', while the undergraduate students of St. Columba's College put up 'The Shelley-Sally' a sketch play written by Prof. M.L.Das and directed by Prof. Rajesh Kumar.

Youth Festivals and National Integration

The Association of Indian Universities (AIU), in collaboration with the University of Bombay organised a two-day national seminar on the 'Role of Inter-University Youth Festivals and Promotion of Culture and National Integration'. Sponsored by the Department of Youth Affairs & Sports, Ministry of Human Resource Development, the seminar sought to elicit views of the participants of previous youth festivals as it was they who experience and understand the essence of the festivals. The seminar was inaugurated by Dr. V.G. Gupchup, Pro-Vice-Chancellor of the Bombay University, while the valedictory address was delivered by Dr. S.D. Karnik, Vice-Chancellor of the host university. Shri Sampson David, Sr. Cultural Officer, AIU, highlighted the significance of the seminar which was attended by over hundred youth participants.

The seminar deliberated on the following sub-themes :

(i) Role of Inter University Youth Festivals in promotion of values, Culture and National Integration.

Chairman - Rohit Awasthi, Dr.Y.S. Parmar University of Horti. & Forestry, Solan.

Rapporteur - K.S.Venkata Raman, Bharathiar University, Coimbatore.

(ii) Organisation and Management of the Inter University Youth Festivals – Cautions & Precautions.

Chairman – Mohammad Malik, Bharathidasan Univ., Trichy.

Rapporteur – Sairam Iyyer, Bombay University.

(iii) Critical Analysis of Cultural Items of the Inter University Youth Festivals.

Chairman - Mahesh Tamanhe, Bombay University

Rapporteur - Alvin Thomas, Bharathidasan Univ., Trichy.

The notable feature of the seminar was that each of the three subgroups was chaired by the participating youth who also acted as Rapporteurs.

On this occasion Lecture-cum-Exhibitions were also held on AIDS and Drug Abuse which were educative and informative for the youth.

World Peace Day

The Kerala chapter of the International Association of Educators for World Peace (IAEWP) celebrated the World Peace Day by organising a seminar at Government Training College, Trivandrum. The Minister for Education Shri E.T. Muhammed Basheer, who inaugurated the celebrations, stressed the need for inculcating communal harmony and tolerance among the students through formal education and among out of school youth and the masses through non formal education. He pleaded for incorporating messages of world peace through curricular and co-curricular activities.

Mr. MSR Dev, Scientist, Indian Space Research Organisation, Thumba, enumerated the scientific advancements which could be used for total destruction of the mankind and also for its prosperity. He asserted that world peace could be established through proper use of science and its teaching.

Dr. K. Sivadasan Pillai, Indian National Chancellor of IAEWP (also Kerala State Chancellor), who presided, explained the activities of IAEWP in Indian states as well as the national convention held at Surat in July '92. The Malta Conference themes (Nov. '92) were also highlighted. He endorsed the idea of creative peace consciousness among children even from the pre-school stage.

It was resolved to start units in colleges, teacher education institutions and select schools, prepare folders, pamphlets, posters etc. to spread the message of communal harmony, world peace etc. take up pilot projects in selected schools/chapters and attempt research studies

National Citizen's Award for Prof. Parikh

Prof. Ramlal Parikh, Vice-Chancellor, Gujarat Vidyapith, Ahmedabad, has been awarded the National Citizen's Award 1991, "for his sustained lifelong contribution in the field of education". He was among the 29 awardees (but the only one in education) recommended by the jury presided over by Justice P.N.Bhagwati, former Chief Justice of Supreme Court.

The award was presented to him by H.E. Dr. Shanker Dayal Sharma, President of India, in New Delhi on September 14, 1992.

IGNOU, NCERT Sign MoU

The National Council of Educational Research and Training (NCERT) and the Indira Gandhi National Open University (IGNOU) are reported to have signed a memorandum of understanding (MoU) to pool together their resources for the development of teacher education in the country, through distance learning mode.

The MoU was signed by the NCERT Director, Dr. K. Gopalan, and the IGNOU Vice-Chancellor, Dr V. C. Kulundai Swamy, in New Delhi recently.

Economic Liberalisation and the Small Industry

The National Institute of Small Industry Extension Training (NISIET) proposes to organise a week long training programme for improving the productivity of investment and to review the impact of new policy of liberalisation on small industry sector on January 4-8, 1993.

NISIET's faculty with their rich and varied experience in small-scale industrial sector would share their knowledge and experience with participants in this programme. Participants will also have an opportunity to share their experience with other professionals in the field. It is the objective of this programme to contribute its mite to the emerging challenges of implementation of policy reforms.

The Programme contents include : Highlights of new policy framework; Pace and direction of structural reforms; Near-term, medium and long-term ramifications; Challenges of effective implementations; Sectoral adjustment process; Programming approach; Optimization procedure; Technology options; Focus on building competitiveness; Training the people to compete; and Mitigating hardship to workers.

The programme is designed to benefit technical, managerial and administrative personnel who belong to promotional and developmental organizations, financial institutions and banks, voluntary organizations and industry associations. Interested entrepreneurs and consultants can also participate in this programme.

Further information may be had from the Registrar, NISIET, Yousufguda, Hyderabad 500 045 (India).

News from Abroad

British VCs Meet

Universities should stop complaining about the low standards of students entering higher education and take a lead in the debate about the National Curriculum by making clear to schools the levels they require from school-leavers, said the Secretary of State for Education John Patten while addressing the Committee of Vice Chancellors and Principals (CVCP).

Referring to recent complaints from some academics that new students are displaying a poor grasp of grammar and spelling, Mr Patten said: "I am aware that expansion has led to concern about the knowledge and skills of students now entering higher education. In particular, some in the universities are questioning the standards of spelling and grammer displayed by school leavers. If that is the case – and you must be the judges – then you must make your views known." He went on : "The academic community should not simply stand on the sidelines and complain. Nor should it seek to do the job of schools for them ...Talk of an additional and essentially remedial foundation year for undergraduates is simply not on. Forget it."

Instead universities should maintain standards by rejecting applicants who fail to measure up to requirements, including if necessary a stipulated level of basic skills. "If pupils cannot meet your requirements, do not admit them. That will ensure that schools adapt and improve."

Mr Patten told vice-chancellors to exploit the opportunities offered by the review of the statutory order for National Curriculum English. Universities and schools were not separated by an impenetrable divide, as the appointment of London University vice-chancellor Stewart Sutherland as chief inspector of schools showed. "The nation needs you to lead from the front, not stand murmuring with resignation on the sidelines," he said.

Professor Sutherland, head of the Office for Standards in Education, agreed that universities did have a responsibility to speak out, "at the point of entry", if basic skills were lacking. He drew attention to basic arithmetical skills as well as English . But, he stressed, there was as yet no clear evidence to support the idea that standards of school-leavers were falling other than the views of individual academics. "We need to collect the evidence about basic skills at the point of entry and see what it says. There has not been a sympathetic look at this in a way that could provide the necessary evidence for action," he said.

He added : "Universities are being pressed to expand their student numbers by the funding mechanism. There are evident risks in that because they have to take the pupils that come through now if they are to fill the places that are being funded at great expense."

Another vice-chancellor said there was no evidence, other than an article by Oxford academic Michael Dummett, in *The Tablet*, that standards were dropping,. "A lot of what teachers in higher education see of the GCSE generation they like : the project work, the ability to work in teams, the approach to inter-disciplinary problems. Higher education teachers would say that the right target is the sixth form curriculum, not the GCSE."

Mr Patten also upped the pressure on universities to accept without further argument external monitoring of their own teaching standards.

Graeme Davies, chief executive of the HEFCE, told the CVCP that future assessment will "predominantly involve peer assessment". Academics would be seconded for between one and three years to the council while supplementary academics would be drawn in, under "call-off" contracts, to undertake between three and four specific assessments a year. There would be a core staff of the eight to 12 members in the quality assessment division of whom six to eight would be former HMI. Staff from all three categories could be asked to undertake any part or all of an individual assessment.

Although the majority of the contract assessors would be academics, Professor Davies said, some would be selected from professional bodies and industry, others might be former HMI. Most of the assessors would be seconded for between 30 and 32 weeks each academic year, returning to their institutions to, for example, undertake research. Institutions lending staff would receive money to pay for replacement teaching and administration.

Assessments will be conducted by teams, using a combination of observation of classroom teaching and "indirect evidence, including standard performance indicators".

Professor Davies said: "This combination of core in-house staff with medium term and short-term contract staff will deliver independence and rigour in a cost-effective way. This organisation model will also ensure, however, that the appropriate strengths and expertise of HMI are utilised while providing the opportunity to draw on a much wider range of expertise and skills."

6th IAEWP World Congress

The 6th World Congress of the International Association of Educators for World Peace (IAEWP) will take place in Malta between the 23rd and 28th November, 1992. The Congress will be jointly organised on behalf of the IAEWP by the Malta Social Action Movement (MAS) and the Malta Union of Teachers (MUT).

The Congress will deal with (a) *Social Welfare*, to include such aspects as crime trends and crime prevention strategies, justice and human rights, and the moral legality of war as a means to solve human conflicts; (b) *Health Care*, to include such aspects as adequate nutrition and world hunger, hazards of nuclear and toxic wastes, water and air pollution, mental health and the role of psychiatry, and the constructive development of the Earth's natural resources; and (c) *Educational Needs*, to include curriculum techniques, supervision, teaching methods, administrative skills and the development of the human potential as advocated in Peace Education Studies.

Further details may be had for Dr. S.N. Prasad, World President, IAEWP, Post-Box No. 113, Janta College of Education, Chandrapur-442401 (Maharashtra).

Australia's Television University

Monash University in Melbourne is to take charge of Australia's new "television university", and it expects up to 12,000 students to be enrolled next year and more than 25,000 by 1995. More than 30 university subjects will be available via Australian Broadcasting Corporation television and radio by next year and the organisers say the number of units will increase to at least 150 by 1995.

For the first time, any Australian will be eligible to enrol in the new university, regardless of qualifications. But students face an upfront fee of Aus$300 for each unit out of 24 needed for a degree, so a full year's study will cost $2,400 – a little more than the present higher education charge that on-campus students pay.

Five new Australian-made television programmes will form key elements of some subjects next year. Others will be based on ABC radio or computer-assisted courses. Subjects will become increasingly print-orientated as students move into their final years.

The federal government is expected to award a 10-year contract to Monash which headed a consortium of five universities that have been running a pilot open learning project this year. In its annual August budget, the government allocated $53 million to the new Open University over the next three years.

Peter Baldwin, higher education minister, also proposed establishing hundreds of "telecottages" to provide electronic resources for students in remote locations. The cottages will be equipped with computers, fax machines, satellite dishes and modems to allow students to tap into university libraries and contact their tutors.

Students taking television-based courses will be able to enrol initially in two degree programmes – a new bachelor of general studies, which will also be offered to on-campus Monash students, and a bachelor of business studies. Special units will also be offered to teachers and nurses.

THESES OF THE MONTH

A list of doctoral theses accepted by Indian Universities

HUMANITIES

Fine Arts

Music

1. Singh, Baboo Lal. **Vindhya kshetriya akashwani kendron dwara prasarit lok sangeet ka sameekshatmak adhyayan.** Awadhesh. Dr S K Banarjee, Prof (Retd), Venket Batalion, Rewa.

Drama

1. Jeeva, M. **Modern theatre movements in Tamil Nadu.** Pondicherry. Dr Indira Parthasarthy.

Language & Literature

English

1. Arulkrishnamoorthy, S. **The problems of pronunciation caused by transliteration of English words into Tamil: Modifications suggested.** CIEFL. Dr B A Prabhakar Babu.

2. Chaudhury, Ranjita. **Aspects of style in five novels of Patrick White, The Aunt's Story, Vass, The Tree of Man, Riders in the Chariot and the Eye of the Storm.** Gauhati. Prof P Kotaky, Department of English, Gauhati University, Guwahati.

3. Ghosh, Krishna. **The relationship between Greek mythology and twentieth century European and American drama with special reference to the Orestes Myth.** Calcutta.

4. Gurmohan Singh. **Existential concerns in the fiction of Anita Desai and Arun Joshi.** Punjabi. Late Dr B R Rao.

5. Mahender Pal. **Quest for self ideal in E M Forster.** Panjab.

6. Mukhopadhyay, Sunil Kumar. **Bankim Chandra the novelist: His mind and art.** Calcutta.

7. Nagaraj, Geetha. **A stylistic approach to the teaching of literature in English.** Bangalore. Dr M A Yadugiri, Department of English, Bangalore University, Bangalore.

8. Punita Rani. **A critical study of the poetry of Emily Dickinson.** Magadh.

9. Talwar, Sree Rashmi. **A study of the representation of the new woman in the fiction of Margaret Drablle and Nayantara Sahgal.** Teresa. Dr C T Indra.

10. Tripathy, Sabita. **Sri Aurobindo's concept of women: A literary analysis.** Sambalpur. Prof H Panda, PG Department of English, Sambalpur University, Jyoti Vihar, Burla.

11. Usha Rani. **An analysis of the language of psychological conflict in the selected novels of Anita Desai.** Panjab.

Russian

1. Murugesan, Reddiar. **Syntatic structure of sentences with secondary predication in English and Russian: A comparative analysis.** Kerala. Dr K Govindan Nair, Prof and Head, Department of Russian, University of Kerala, Thiruvananthapuram.

Sanskrit

1. Bandyopadhyay, Suresh Kumar. **Prachin Bharatiya bastu sthapatyer alochana.** Rabindra Bharati.

2. Basu, Sangmitra. **Brihdarnyakvartliksarsya prathamadhyayasya sameekshatmakadhyayanam.** Shastri Sanskrit.

3. Lakhvir Singh. **Vyakaran Siddhant Kaumidi mein vivechit laukik Sanskrit ke dughat prayogon kee sameeksha.** Punjabi. Dr Bhim Singh, Reader, Department of Sanskrit, Punjabi University, Patiala.

4. Sharma, Kirtikant. **Vyakarna Mahabhashye samudahrit vaidikprateekanam sameekshatmakdhyayanam.** Shastri Sanskrit.

5. Sharma, Lekh Raj. **A critical study of Vasistha-Samhita with special reference to Yog-Shastra.** Panjab.

6. Sharma, Parshotam. **Acharya Bhim virachit paribhasharya Bhandari ka sameekshatmak sampadan tatha adhyayan.** Jammu. Dr Ved Ghai, Prof and Head, Department of Sanskrit, University of Jammu, Jammu.

7. Sharma, Shakti Dhar. **Upanishadon aur Gita mein yog tatva: Patanjal Yogdarshan ke pariprekshaya mein.** Panjab.

Punjabi

1. Garcha, Harinder. **Bharti-mith vich aurat da pratik ate Guru Nanak-Bani.** Panjab.

2. Harcharan Singh. **Nanak Singh de navalan da samaj shastri adhyayan.** Panjab.

3. Paramjit Singh. **Baajaroo Punjabi novel vidhi te parkarj.** Panjab.

4. Rajinder Kumar. **1975 ton bad de Punjabi natak dian nat jugatan.** Punjabi. Dr S K Verma, Lecturer, Department of Punjabi, Punjabi University, Patiala.

Hindi

1. Agrawal, Shashi Prabha. **Nirala sahitya: Mulya mimansa.** Jiwaji. Dr Puran Chandra Tiwari, Prof (Retd), Jawahar Colony, Lashkar, Gwalior.

2. Choudhary, Krishan Kanta. **Swatantra Bharat ka mahakavyon ke sandarbh mein lokyatan, 1950-80.** Jammu. Dr Janak Gupta, Prof and Head, Department of Hindi, University of Jammu, Jammu.

3. Dubey, Meenakshi. **Muktibodh kee pratinidhi kavitayon ka shaili-vaigyanik evam arthatattvik saundarya.** BHU. Dr S P Singh.

4. Mishra, Triyugi Narain. **Pant kavya ke vaicharik evam kalatmak sopan.** Jiwaji. Dr Pratibha Chaturvedi, Department of Hindi, Govt Science College, Gwalior.

5. Negi, Uma. **Chhattisgarhi parva geeton ka anusheelan.** Ravishankar. Dr (Smt) Satya Bhama Adil, Department of Hindi,Govt D B Girls Post Graduate College, Raipur.

6. Ramani, V N. **Swatantrayottar Hindi upanyason mein nari swatantrata kee bhavana.** Gandhi. Dr K K Sathyanathan, Prof, Department of Hindi, St Albert's College, Ernakulam.

7. Sneh Lata. **Rajendra Yadav ke katha sahitya ka samaj shastriya adhyayan.** Punjabi. Dr Yogendra Bakshi, Lecturer, Govt Mohindra College, Patiala.

8. Vankar, Ranchhodbhai Hirabhai. **Tulsi kavya mein rasparikalpana.** Patel. Dr Ramanbhai H Patel, Prof and Head, Post Graduate Department of Hindi, Sardar Patel University, Vallabh Vidyanagar.

Urdu

1. Badar Sultana. **A critical monograph on prose work of Waheeduddin Saleem.** Osmania.

2. Farooqi, Mohammad Kutbuddin. **Critical edition of the poetic works of Syed Raziuddin Kaifi.** Osmania.

3. Rehana Sultana. **Prof Masud Hussain Khan kee adbi khidmak ka tanqeedi mutalea.** Osmania.

4. Tasauwar, Harbans Singh. **Qurratulain Hyder Bahaisiyat novel nigar.** Panjab.

Bengali

1. Biswas, Ratan Kumar. **Tagore's visits to hill stations and their response to his literature.** NBU.

2. Chakraborty, Padmapani. **Bihar as reflected in Bengali literature.** Magadh.

3. Ghosh, Somen. **Cinematization of literature: Theory and style.** Calcutta.

4. Neogy, Gopa. **Himalayer prekshapate Bangla sahityer dhara.** Rabindra Bharati.

Assamese

1. Barpujari, Jitanjali. **Asamiya, upanyasat uttar purbanchalar janajatiya jeewan: Ek vishleshanatmak adhyayan.** Gauhati. Dr Umesh Deka, Lecturer, Department of Assamese, Gauhati University, Guwahati.

2. Mazumdar, Santanamayee. **Kamalakanta Bhattacharyar: Jivan aru sahitya eti vishleshanatmak adhyayan.** Gauhati. Prof B Sarma, Department of Modern Indian Langauges, Gauhati University, Guwahati.

Oriya

1. Meher, Manindra Kumar. **Manoja galpare manaba jibana.** Sambalpur. Dr Adikanda Sahoo, Reader, Post Graduate Department of Oriya, Sambalpur University, Jyoti Vihar, Burla.

Marathi

1. Deshpande, Sunanda Bhaskar. **Dr Madhukar Ashtokar yanchya vangmayacha chikitsak abhyas.** Nagpur. Dr (Mrs) Malati Patil, Vasantraj Nayak Arts and Social Science Institute, Nagpur.

2. Majumdar, Dhananjaya. **Pradhyapak Anant Kanekarnchaya sahityancha sameekshatmak abhyas.** Devi Ahilya. Dr Lila More, Department of Marathi, Govt Arts and Commerce College, Indore.

Persian

1. Qamer Jahan. **Vidarbha ka Farsi adab.** Nagpur. Dr Abdul Rab Irfan, V N Institute of Arts and Social Sciences, Nagpur.

Tamil

1. Eswaran, S. **T K Chidambaravadha Mudaliarin kalai, elakhiyappani -oru aaivu.** Bharathidasan. Dr N Rajagopalan, Reader (Retd), Department of Tamil, Bharathidasan University, Trichy.

2. Ganesan, S. **Kamiba Ramayanathill uraiadal thirau - oru aaivu.** Bharathidasan. Dr (Mrs) C Sargunam, Senior Lecturer, Department of Tamil, National College, Trichy.

3. Oumarany, V. **The status of Tamil society and ideas on society in writings of Bharathiar.** Pondicherry. Dr K P Aravanan, Department of Tamil, Pondicherry University, Pondicherry.

4. Rajarethinam, K. **Sangha kalathill podhu makkal.** Bharathidasan. Dr N Rajagopalan, Reader (Retd), Department of Tamil, Bharathidasan University, Trichy.

5. Rengarajan, Dharmambal. **Writings of Balakumaran: A feminist view.** Teresa. Dr V P Devadatta, Prof and Head, Department of Tamil, Mother Teresa Women's University, Kodikanal.

Kannada

1. Bhatta, Sreerama. **Kannada margakavya parumpareya mole Kalidasana prabhava.** Bangalore. Dr H S Venkatesha Murthy, Reader, Department of Kannada, St Joseph's College of Commerce, Bangalore.

Telugu

1. Dilavar, M. **Dasarathi kavita: Vyaktitva pariseelana.** Telugu.

2. Satyanarayana, Manepalli. **Srikakula Girijana Raitanga Poratam: Praja sahityam.** Telugu.

3. Venkatasham, N R. **Janapada sahithyam - Budagajangala samskruthi perisheelana.** Osmania.

4. Venkateswara Rao, R S. **Adhunika Telugu sahityam lo adhikshepa dhoranulu.** Telugu.

Geography

1. Lambe, Kalpana. **Raipur Jile mein krishi bhoomi upyog ke praroop kee parivartansheelata evam poshan.** Ravishankar. Dr Shankar Roy, Prof and Head, School of Studies in Geography, Pt Ravishankar Shukla University, Raipur.

2. Mathur, Ravi Shanker. **Impact of Jaipur City on surronding villages.** Rajasthan. Dr (Mrs) Lakshmi Shukla and Dr H S Mathur, Assoc Prof, Department of Geography, University of Rajasthan, Jaipur.

3. Md Nasar Ahmad. **Resource base of industrialization: A case study of Nawada District, Bihar.** Magadh.

4. Mishra, Seema. **Ecosystem, food consumption and nutritional and health status of Baiga Tribe in Eastern Mandla.** HS Gour. Dr P D Tiwari, Department of Geography, Dr Hari Singh Gour Vishwavidyalaya, Sagar.

History

1. Goswami, Debabrata. **Studies in the military history of Tripura, 1490 to 1947.** Calcutta.

2. Jain, Vandana. **Siron Khurd Lalitpur se prapt murti kala ka adhyayan.** HS Gour. Dr R N Agrawal, Department of Ancient Indian History, Culture and Archaeology, Dr Hari Singh Gour Vishwavidyalaya, Sagar.

3. Mishra, Sukh Deo. **Madhya Pradesh ke prachin Gan Rajya: Ek itihasik sarvekshan.** HS Gour. Dr B N Sharma, Prof (Retd), Village and P O Macchera, Via Bankedi.

4. Mohapatra, Hemanta Kumar. **Second Congress Ministry in Orissa, 1946-1950: Problems, prospects and achievements.** Utkal.

5. Mukhopadhyay, Nilanjana. **Social, economic and religious life in early Bengal.** Calcutta.

6. Rajput, Anita. **Smritiyon ka rajshastriya adhyayan.** HS Gour. Dr R N Agrawal,Department of Ancient Indian History, Culture and Archaeology, Dr Hari Singh Gour Vishwavidyalaya, Sagar.

7. Shafiq, Zeba. **Banda Janpad ka puratattva.** HS Gour. Dr S D Mishra, Head, Department of Ancient Indian History, Culture and Archaeology, Dr Hari Singh Gour Vishwavidyalaya, Sagar.

8. Singh, Anil Kumar. **Marathon ke adheen Garha Mandla kshetra, 1780 se 1818 isvi.** HS Gour. Dr Suresh Mishra, Department of History, S N Government Post Graduate College, Khandwa.

9. Singh, Shitala Prasad. **Adwaghati mein pura-paryavaran evam pragaitihasik sanskritiyon ka adhyayan.** Awadhesh. Dr R K Verma, Prof and Head, Department of Ancient Indian History, Culture and Archaeology, Awadhesh Pratap Singh University, Rewa.

10. Sodia, Chandra Bhan. **Dr Bhimrao Ramji Ambedkar: Vyaktitva evam krititva ek itihasik sarvekshan.** HS Gour. Dr D B Trivedi, Head, Department of History, Dr Hari Singh Gour Vishwavidyalaya, Sagar.

11. Swain, Ahalya. **Some aspects of British impact on Orissa in the 19th century.** Sambalpur. Prof P K Mishra, Post Graduate Department of History, Sambalpur Univesity, Jyoti Vihar, Burla.

EDUCATION NEWS INDEX

A list of select articles and editorials on education from newspapers received in the AIU Library during September 1992

EDUCATIONAL PHILOSOPHY

Palit, Chittabrata. Teacher thoughts: Radhakrishnan on education. **The Statesman** 5.9.92.

EDUCATIONAL PSYCHOLOGY

Muralidharan, Y G. Lead, kindly guide. **Deccan Herald** 18.9.92.

Srivastava, Sushila. Onus is on the parents. **The Hindu** 22.9.92.

Wasi, Muriel. Learning process. **The Hindustan Times** 12.9.92.

EDUCATIONAL SOCIOLOGY

Agamprakash. Caste-based job quotas. **Patriot** 8.9.92.

Dileep, Lalita. Minorities split over new laws. **Indian Express** 20.9.92.

Kumar, R Mohan Kanaga. TN minority unwilling to share 50:50. **Indian Express** 1.9.92.

Mohanty, N R. Biju brings caste to the forefront. **The Times of India** 4.9.92.

RESERVATION WRANGLE in Orissa (Editorial). **The Hindu** 28.9.92.

EDUCATIONAL POLICY & PLANNING

Bhaskar Rao, M K and Habbu, Arun Kumar. Navodaya: Growing pains. **Deccan Herald** 25.9.92.

EDUCATION AND development (Editorial). **The Assam Tribune** 20.9.92.

EDUCATION FUNDING (Editorial). **Deccan Herald** 22.9.92.

Goswami, Dibya Hash. Purpose of education & pursuit of perfection. **The Assam Tribune** 10.9.92.

HALTING THE proliferation (Editorial). **The Hindu** 5.9.92.

Mudaliar, Gangadhara and Prasanna Kumar, J A. Modern-day gurukulas. **Deccan Herald** 11.9.92.

Thaman, R K. Quality schools: What they aim at. **The Tribune** 13.9.92.

UNPLANNED EXPANSION (Editorial). **The Hindustan Times** 9.9.92.

Vattam, Krishna. Still a long way to go. **Deccan Herald** 4.9.92.

EDUCATIONAL ADMINISTRATION

ABC OF scholarship (Editorial). **The Telegraph** 5.9.92.

Amrik Singh. Capitation fee: SC verdict not enough. **The Times of India** 19.9.92.

________. State of higher education: Subsidised college courses cannot be sustained. **Indian Express** 26.9.92.

Chalam, K S. Privatisation: For and against. **The Hindu** 8.9.92.

CLASSES OF learning (Editorial). **The Statesman** 8.9.92.

DARK FARCE ? (Editorial). **The Tribune** 25.9.92.

Gandhi, Kishore. Financing higher education. **The Hindustan Times** 30.9.92.

Goswami, Dibya Hash. State college scenario. **The Assam Tribune** 30.9.92.

Hardwari Lal. Rhetorical judgment: Apex court ignores realities in capitation fee case. **Indian Express** 1.9.92.

Kamath, M V. What is wrong with our educational system ? **Free Press Journal** 17.9.92.

Karin, N A. Signals of deterioration ? **The Hindu** 15.9.92.

KENTUCKY STUDENTS sell pencils, rubbish bags to reform schools (Editorial). **The Economic Times** 20.9.92.

Mitra, Ashok. Laissez faire in the classroom. **The Telegraph** 9.9.92.

Moin Qazi. Slur on India's education system. **The Assam Tribune** 27.9.92.

Mojumdar, Modhumita. High price of education. **The Statesman** 27.9.92.

Rajeshwar Rao, Y and Naik, Jitendra S. Reforming + 2 education. **Deccan Chronicle** 30.9.92.

SEVERE INDICTMENT (Editorial). **The Hindu** 21.9.92.

Shekhar, Indu. Capitation fees: Selling eduation to highest bidder. **The Pioneer** 1.9.92.

Srinivas Rao, A. Headless OU (Osmania University). **Deccan Chronicle** 6.9.92.

STAYING CAPITATION (Editorial). **The Hindustan Times** 28.9.92.

EDUCATION & POLITICS

AFTER JANARDHAN Reddy (Editorial). **Deccan Chronicle** 22.9.92.

Khan, Atiq. School syllabus revision draws flak in UP. **Deccan Herald** 6.9.92.

Bedi, Kiran. "State government is responsible". **The Hindustan Times** 20.9.92.

Bedi, Rahul. Education orphaned in Punjab. **Indian Express** 23.9.92.

Chadha, Kumkum. Purely academic issue. **The Hindustan Times** 20.9.92.

Dutt, K G. When politicians mess around with research: A look at the ICAR's regional centres. **The Tribune** 17.9.92.

Khosla, Shyam. Rewriting history. **The Tribune** 14.9.92.

Kuldeep Kumar. History at the crossroads. **The Pioneer** 27.9.92.

Lalthanhawla. "Kiran Bedi's version is concocted". **The Hindustan Times** 20.9.92.

LAST NAIL (Editorial). **Free Press Journal** 28.9.92.

Munshi, Debashish. Seats of discontent. **The Times of India** 21.9.92.

NOT IN Bengal (Editorial). **The Hindustan Times** 1.9.92.

POLITICS IN education (Editorial). **Deccan Herald** 4.9.92.

STRICTURES AGAINST Andhra CM (Editorial). **Free Press Journal** 21.9.92.

TINKERING WITH text (Editorial). **The Tribune** 27.9.92.

CURRICULUM

Christiansen, Donald. New curricula and the problems. **The Hindu** 22.9.92.

Emmanuel, Amala. History made alive. **The Hindu** 6.9.92.

Singh, G M and Bhatti, S S. Energy sciences for developing countries. **The Tribune** 3.9.92.

LANGUAGE & LANGUAGE POLICY

Bailur, M G. Hindi as a link language. **Deccan Herald** 28.9.92.

Sanyal, Sunanda. English classes-I: Kothari Commission revisited. **The Statesman** 15.9.92.

———— . English classes-II: The key to social mobility. **The Statesman** 16.9.92.

SCIENCE EDUCATION

BACHELOR OF science (Editorial). **The Times of India** 28.9.92.

Lalit Kishore. Making science enjoyable for children. **The Hindu** 29.9.92.

VOCATIONAL EDUCATION

Amrik Singh. Professional education: The malaise within. **The Hindustan Times** 26.9.92.

Beteille, Andre. Access to medical education: Matter of right and policy. **The Times of India** 11.9.92.

DEFIES LOGIC (Editorial). **Deccan Herald** 28.9.92.

ENFORCING STANDARDS (Editorial). **Indian Express** 1.9.92.

Gopalaswamy, T P. 'Almost everything has gone wrong with IIMs'. **The Economic Times** 13.9.92.

HALTING MEDICAL colleges (Editorial). **The Times of India** 22.9.92.

Hiranandani, L H. Medical colleges: Higher fees justified. **The Hidustan Times** 2.9.92.

IDEA INCREDIBLE, says industry (Editorial). **The Economic Times** 13.9.92.

Joshi, Charu Lata. New power-baggers. **The Times of India** 6.9.92.

Malik, O P. Computer education: Not up to the mark. **The Economic Times** 9.9.92.

Rajagopalan, T. Look at management institutes-I. **The Hindu** 21.9.92.

———— . Management institutes-II. **The Hindu** 23.9.92.

Sanajaoba, Naorem. For a thoroughbred legal education. **The Assam Tribune** 29.9.92.

Vedantam, Vatsala. Admissions Vs merit: A medical scam. **Deccan Herald** 3.9.92.

Venkata Reddy, K. For realistic, vocational guidance. **The Hindu** 8.9.92.

DISTANCE EDUCATION

Khan, Asif. Wealth of learning. **Deccan Herald** 25.9.92.

TEACHERS & TEACHING

Advani, Shalini. School teachers: Silence of lambs. **The Pioneer** 1.9.92.

Das, Lina. Blackboard jungle. **The Times of India** 5.9.92.

DAY OF the teacher (Editorial). **The Hindustan Times** 5.9.92.

Desai, V H. Rights and responsibilities of teachers. **Deccan Chronicle** 6.9.92.

Ghosh, Arup. Lesson in teaching. **The Statesman** 6.9.92.

Lalitha, H Y. English takes a beating. **Deccan Herald** 14.9.92.

Mathur, V S. Education, teachers and tommorow ! **The Assam Tribune** 19.9.92.

Panneerselvam, A. Teacher training: The loopholes. **The Hindu** 22.9.92.

Shah, Deepa. Of teachers and tutors. **The Hindustan Times** 12.9.92.

Sridhara, M V. To check the rot of routinism. **The Hindu** 29.9.92.

Srivastava, Onkar Nath. Of teachers and their days. **National Herald** 13.9.92.

TEACHERS AND job (Editorial). **The Assam Tribune** 10.9.92.

WARNING TO teachers (Editorial). **The Statesman** 25.9.92.

EDUCATIONAL TECHNOLOGY

Gupta, Nilakhya. Education: A fresh look. **The Telegraph** 1.9.92.

Jolly, Pratibha and Mahajan, Shobhit. Myopia on computers in education. **Indian Express** 28.9.92.

Joshi, Dinesh. Satellite instruction converts nation into one big classroom. **The Pioneer** 2.9.92.

EDUCATIONAL EVALUATION

Easwara Reddy. Looking for a way out of the impasse. **The Hindu** 15.9.92.

Krishna Rao, C V. Postponement is to their disadvantage. **The Hindu** 15.9.92.

POLITICS OF copying (Editorial). **The Hindustan Times** 19.9.92.

Shivaram, Choodie. Will the semester system work this time? **Deccan Herald** 11.9.92.

ECONOMICS OF EDUCATION

ANOTHER BRAIN drain (Editorial). **Deccan Herald** 28.9.92.

LIBRARIES & BOOKS

Bhuyan, Devyani. Unfair test and a rap on the knuckles. **The Economic Times** 27.9.92.

Davidar, David. Publishing in the developing world. **The Hindu** 13.9.92.

Fewins, Clive. Happy publisher whose obscure titles often sell on the 'ooh' factor. **The Economic Times** 20.9.92.

GOOD, THE bad, and the NCERT (Editorial). **The Pioneer** 27.9.92.

Kalia, D R. Public library system in a mess. **The Hindu** 2.9.92.

Khurana, Ravi. Learning, byte by byte. **The Pioneer** 27.9.92.

Krishnaswamy, N. Needed, a different kind of textbook. **The Hindu** 29.9.92.

Mojumdar, Modhumita. Cultivating the reading habit. **The Statesman** 6.9.92.

Naik, Ulhas G. Library for everyone. **Deccan Herald** 4.9.92.

Rangra, V K. IFLA-92 and the third world. **Patriot** 28.9.92.

Verzola, Roberto. Piracy of intellectuals and intellectual property. **Free Press Journal** 15.9.92.

WHAT AILS libraries (Editorial). **The Hindustan Times** 3.9.92.

STUDENTS & STUDENT ACTIVITIES

Chakravartty, Gargi. Ragging and cultural decadence. **The Hindustan Times** 12.9.92.

Kalkur, Ashok. Mini-battle for Delhi. **The Hindu** 18.9.92.

Thapa, Vijay Jung. Class of '92. **The Times of India** 27.9.92.

PHYSICAL EDUCATION & SPORTS

Puri, Narottam. India's sports policy. **The Assam Tribune** 6.9.92.

SPECIAL EDUCATION

Joshi, Uma. Educating disabled children. **National Herald** 23.9.92.

Santhanam, Kausalya. Overcoming handicaps in learning. **The Hindu** 20.9.92.

WOMEN'S EDUCATION

TOWARDS GENDER justice (Editorial). **The Hindu** 25.9.92.

WOMEN ENGINEERS struggle to carve niche in male territory (Editorial). **The Pioneer** 11.9.92.

ADULT EDUCATION

Banerjee, Piali. Dispelling ignorance in Mewat. **The Statesman** 15.9.92.

Ifthekhar, J S. Nizamabad's success story. **Indian Express** 9.9.92.

Kakar, Saleena. Waking up to learning. **The Pioneer** 20.9.92.

Manmadhan, Prema. Mayhem in most literate state. **Indian Express** 11.9.92.

Matjee, Javed. Step towards illiteracy. **The Assam Tribune** 13.9.92.

Mishra, Lakshmidhar. Literacy campaign-spreading the message with success. **The Assam Tribune** 8.9.92.

Prasad, S. Politics of literacy. **Deccan Herald** 4.9.92.

_______ . Some losses, many gains. **Deccan Herald** 4.9.92.

Puri, Rakshat. Reading, writing and voting. **The Hindustan Times** 15.9.92.

Rai, Usha. Literacy: The backlash has begun. **Indian Express** 9.9.92.

Sandhu, Nirmal. UT strives for total literacy. **The Tribune** 3.9.92.

Satyanarayana, E V. Write to awareness. **Deccan Herald** 4.9.92.

Sivaswamy, G. Getting immune to poverty and illiteracy ? **The Assam Tribune** 23.9.92.

ELEMENTARY & SECONDARY EDUCATION

Gopalakrishnan, Saroja. Smother not the joys of childhood. **The Hindu** 8.9.92.

Khusro, A M. Nation's primary task: Bringing the poor from the work spot to school. **Indian Express** 2.9.92.

Shukla, Subir. Out of tune with realities. **The Hindu** 29.9.92.

TIGER NEED meat (Editorial). **The Economic Times** 22.9.92.

COMPARATIVE EDUCATION & COUNTRY STUDIES

Sood, Rajender. Australia calling. **The Hindustan Times** 12.9.92.

INSTITUTIONAL PROFILE

Bhatia, Ashima. Lady Irwin (College): A tradition of producing good homemakers. **The Pioneer** 15.9.92.

Messias, Lionel. This trust did not live up to its name: Sri Ramachandra Educational and Health Trust. **The Economic Times** 6.9.92.

BIOGRAPHICAL PROFILE

Jayarajan, P. Ranganathan's contributions: Fundamental and seminal. **The Hindu** 2.9.92.

Osrat, Mumtazyar. Teacher-philosopher of great depth: Dr S Radhakrishnan. **Deccan Chronicle** 5.9.92.

Phadke, Vinayak D. Great teacher, his teachings: Dr S Radhakrishnan. **Patriot** 5.9.92.

Rau, Leila. Teacher-philosopher: Dr S Radhakrishnan. **The Hindu** 5.9.92.

CLASSIFIED ADVERTISEMENTS

MAHATMA GANDHI UNIVERSITY

NOTIFICATION

No.6721/88/AII(1)/Admn. **Dated : 16-9-1992**

Applications in the prescribed form are invited from qualified candidates for appointment to the following posts in the University. The appointments will be governed by the provisions of the Mahatma Gandhi University Act and the Statutes and Ordinances applicable thereunder.

Sl. No.	Name of post	No. of posts	Scale of pay	Specialisation, if any	Reservation, if any
1.	Director/Professor School of Behavioural Sciences	1	Rs. 4500-7300		Open
2.	Reader School of Gandhian Studies & Peace Science	1	Rs. 3700-5700		Open
3.	Reader School of Pure & Applied Physics	1	Rs. 3700-5700	Theoretical Physics/Laser Spectroscopy	Open
4.	Reader School of Chemical Sciences	1	Rs. 3700-5700	Inorganic Chemistry	Open
5.	Reader School of Bio-Sciences	1	Rs. 3700-5700	Bio-Technology	Ezhava
6.	Lecturer in Computer Sciences	3	Rs. 2200-4000	Any one of the following fields :	One post reserved for Ezhava community.
	(Computer graphics, Computer aided design, Theoretical computer Science, Design and analysis of algorithms, programming Languages and Environments, Operating Systems, Data base management systems, Systems Programming, Computer Networks, Artificial Intelligence and Expert Systems, Software Engineering).				
7.	Lecturer in Mathematics	1	Rs. 2200-4000	Mathematics	SC/ST
8.	Lecturer School of Pure & Applied Physics	1	Rs. 2200-4000	Condensed matter Physics/Theoretical Physics	Open
9.	Lecturer School of Chemical Sciences	1	Rs. 2200-4000	Physical Chemistry	Open
10.	-do-	1	Rs. 2200-4000	Organic Chemistry	SC/ST
11.	-do-	1	Rs. 2200-4000	Organic Chemistry	Open
12.	-do-	1	Rs. 2200-4000	Polymer Chemistry	Muslim
13.	-do-	1	Rs. 2200-4000	Physical Chemistry	Open
14.	Lecturer School of Social Sciences	1	Rs. 2200-4000	Ethnography	SC/ST

Application forms alongwith details regarding qualifications for the posts, age limits and application fee can be had directly or by post from the Deputy Registrar, Administration II, Mahatma Gandhi University, Priyadarsini Hills (PO), Kottayam 686 560, on payment of Rs. 20/- (Rupees twenty only) to be remitted by pay- in-slip in the current account of Mahatma Gandhi University with the State Bank of Travancore or in the Government treasury under the Head of Account, "MGUF-8658". Applicants from outside the state shall remit the prescribed fee for application by crossed postal order/Demand Draft drawn in favour of the Finance Officer, Mahatma Gandhi University, payable at Priyadarsini Hills (PO)/ State Bank of Travancore Athirampuzha. Those who wish to get the application form by post shall send a self-addressed envelope of size 27 cm x 12 cm, affixing stamps worth Rs. 2/-. Last date for receipt of filled in applications at this office is **7-11-1992.**

Office of the
Mahatma Gandhi University
Priyadarsini Hills PO
Kottayam

Dr. M.C.CHACKO
REGISTRAR

NORTH GUJARAT UNIVERSITY
PATAN-394265

Applications are invited in the prescribed form alongwith details available from the office of the North Gujarat University, Rajmahel Road, Patan (N.G.) Dist: Mehsana-Gujarat between 11-00 a.m. and 2-00 p.m on payment of Rs.10/- in cash or by a crossed I.P.O in favour of "Registrar, North Gujarat University, Patan" for the following posts in the various post-graduate departments of the University so as to reach the undersigned on or before 11.11.1992.

Sr.No.	Post and Pay Scale	Subject and Number of vacancies	
1.	Professor (Rs.4500-7300 + other allowances as per University Rules) (Two posts reserved, one each for S.C. and S.T. candidates)	English	1
		Mathematics	1
		Chemistry	1
		Sanskrit	1
		Total	4
2.	Reader (Rs. 3700-5700 + other allowances as per University Rules) (Two posts reserved, one each for S.C. and S.T.candidates)	English	1
		Mathematics	1
		Chemistry	1
		Sanskrit	1
		Total	4
3.	Lecturer (Rs. 2200-4000 + other allowances as per University Rules)(Four posts reserved, two posts for S.T. candidates and one each for S.C.and Socially & Educationally Backward class candidates)	English	2
		Mathematics	2
		Chemistry	2
		Indian Culture	1
		Prakrit	1
		Total	8

Note : Knowledge of Sanskrit preferred for lecturers in Indian Culture and Prakrit.

Other conditions :

1. Knowledge of Gujarati is essential.
2. Candidates called for the interview will have to attend the same at their own expenses.
3. Those who applied earlier for the above posts will be considered again at the time of holding the interview which they will be asked to attend.

D.D.BARAD
REGISTRAR

INDIAN COUNCIL OF MEDICAL RESEARCH

ICMR AWARDS-1992.

Indian Council of Medical Research, New Delhi **extends the date upto 16th November, 1992** for submission of nominations/applications from Indian Scientists for its various prizes and awards in the field of Biomedical Sciences. Application forms and other relevant information about the prizes can be obtained from the Director-General, Indian Council of Medical Research, Ansari Nagar, New Delhi-110029.

MAR THOMA COLLEGE

(Affiliated to Mahatma Ghandhi University)

Thiruvalla-3
Kerala, S. India

WANTED

Lecturer : Chemistry (leave vacancy)

Age & Qualification :
As per Government/University rules

Application forms can be had from the Principal, Mar Thoma College, Thiruvalla-3, on payment of Rs. 50/-. Apply within one month from the date of this notification.

PRINCIPAL

CHAUDHARY CHARAN SINGH HARYANA AGRICULTURAL UNIVERSITY, HISAR

Corrigendum to Adv. No.5/92 which appeared in the University News on 14.9.92

The candidates may please note the following changes :

1. Last date of receipt of applications has been extended to 28.10.92.
2. Following note be read under all the teaching posts at Sr. Nos. 1 to 3 :
"One or more qualifications relaxable in case of candidates found otherwise outstanding".

Registrar

It Pays
to
Advertise
in
University News

INDIAN INSTITUTE OF TECHNOLOGY : DELHI
HAUZ KHAS : NEW DELHI - 110016

NOTICE FOR ADMISSION TO Ph.D PROGRAMMES
II SEMESTER 1992-93.

Advt. No. IITD/PGS/3/92

Applications are invited for admission to the Ph.D programmes in the Departments/Centres mentioned below for the II Semester 1992- 93 commencing December 31st, 1992. Detailed information is given in the Information Brochure which will be supplied along with the application form:

1. Ph. D. (Full-Time, Sponsored & Part-Time)

(a) Departments/Centres

(i) **Engineering Departments:** Applied Mechanics, Chemical Engineering, Civil Engineering, Computer Science & Engineering, Electrical Engineering, Mechanical Engineering and Textile Technology.

(ii) **Science Departments:**Chemistry, Mathematics and Physics.

(iii) **Humanities and Social Sciences Department**

(iv) **Interdisciplinary Centres:** Applied Research in Electronics, Atmospheric Sciences, Bio-Chemical Engineering, Biomedical Engineering, Educational Technology, Energy Studies, Instrument Design & Development, Industrial Tribology, Machine Dynamics & Maintenance, Management Studies, Materials Science & Technology and Rural Development & Technology.

(b) MINIMUM QUALIFICATION FOR ADMISSION

(i) Master's degree in Engineering/Technology/Sciences/Humanities in respective discipline or equivalent with a minimum GPA of 6.75 on a 10-point scale or equivalent (as determined by IITD) wherever letter grades are awarded or 60.00% aggregate marks, where marks are awarded.

(ii) In exceptional cases, candidates with B.Tech degree or equivalent with excellent record (GPA of 7.50 on a 10-point scale or 70.00% marks) will be considered eligible for admission provided they have qualified either GATE or any other national level examinations like UGC/CSIR.

(iii) For Ph.D programme in Biomedical Engineering, candidates with MBBS Degree seeking admission to the Ph.D programme in this Centre are required to qualify BIOMEET examination conducted by IIT Bombay.

(iv) Full-time candidates who do not possess an M.Tech degree in the relevant field or equivalent are required to have valid GATE score for Engineering/Technology/Science disciplines or are required to qualify in UGC/CSIR fellowship examination for Sciences/Humanities & Social Sciences disciplines.

RELAXATION

(i) Relaxation in GPA to 6.25 or 55.00% marks in minimum Qualifying criteria may be permitted for SC/ST candidates, and those with MA degree in English for Ph.D in English in the Department of Humanities & Social Sciences. In the case of SC/ST candidates falling under category (ii) above, 5% relaxation in marks or equivalent relaxation in GPA on 10-point scale may be permitted.

(ii) For Physically Handicapped persons, relaxation in GPA to 5.75 on a 10-point scale or in marks to 50% may be permitted.

(c) SCHOLARSHIP FOR FULL-TIME STUDENTS

(i) Regular students with M.Sc/M.A/B.Tech or equivalent qualification with valid GATE score/UGC/CSIR fellowship award will be eligible for scholarship @ Rs. 1800/- per month for first two years and Rs. 2100/- per month for subsequent years as per Institute rules; and

(ii) candidates with M.Tech./M.E.or equivalent degree will be eligible for scholarship @ Rs. 2400/- per month for the first 2 years and Rs. 2500/- per month for subsequent years as per the rules of the Institute.

2. GENERAL INFORMATION

(a) 15% of the seats are reserved for SC and 7.5% for the ST candidates.

(b) One seat is reserved for Physically Handicapped persons.

(c) Candidates called for appearing at written test and/or interview will be paid to and fro second class railway fare by shortest route. However, this provision will not apply to sponsored and part-time candidates.

(d) Only employees of public sector undertakings or Government organisations or private industries (approved by Faculty Boards) with a minimum experience of two years as on Ist January, '93 and Defence sponsored officers are eligible as sponsored and part time candidates.

(e) The candidates seeking admission as a Sponsored candidate or on Part-time basis are required to submit along with their application "Sponsorship Certificate" or "No Objection Certificate" as the case may be, from their employer in the format stated in the INFORMATION BROCHURE.

Applications unaccompanied by such certificates from the employer will not be entertained.

(f) Hostel accommodation will be available only to full-time students (except for those who are Delhi based) subject to availability.

3. HOW TO APPLY

Application form and Information Brochure can be obtained from the Asstt. Registrar (PGS) by sending application fee of Rs. 25/- by a crossed Bank/Demand Draft drawn on STATE BANK OF INDIA in favour of IIT Delhi payble at SBI, IIT, New Delhi, alongwith a self addressed envelope (25cm x 11cm) affixing postage stamps worth Rs. 3.00 and superscribed"Application for Ph.D". Application Forms can also be had during office hours from the Counter (Room No. AD-236) against Bank/Demand Draft for Rs. 25/- drawn on STATE BANK OF INDIA in favour of IIT Delhi payable at IIT Branch, New Delhi. Application forms can also be obtained from SBI, IIT Delhi on cash payment of Rs. 27/- . THE NO. AND DATE OF THE BANK DRAFT SHOULD BE MENTIONED BY THE CANDIDATE AT THE APPROPRIATE COLUMN WHILE SUBSEQUENTLY SUBMITTING THE PRINTED APPLICATION FORM/TESTIMONIALS.

The completed applications should be sent by the candidates direct to the Asstt. Registrar (PGS), Indian Institute of Technology, Hauz Khas, New Delhi-110016. Those who wish to apply for admission to more than one Department/Interdisciplinary Centre or Programme should make separate application with prescribed fee. The application form at the top with all enclosures placed below, should be secured together tightly with a tag before mailing.

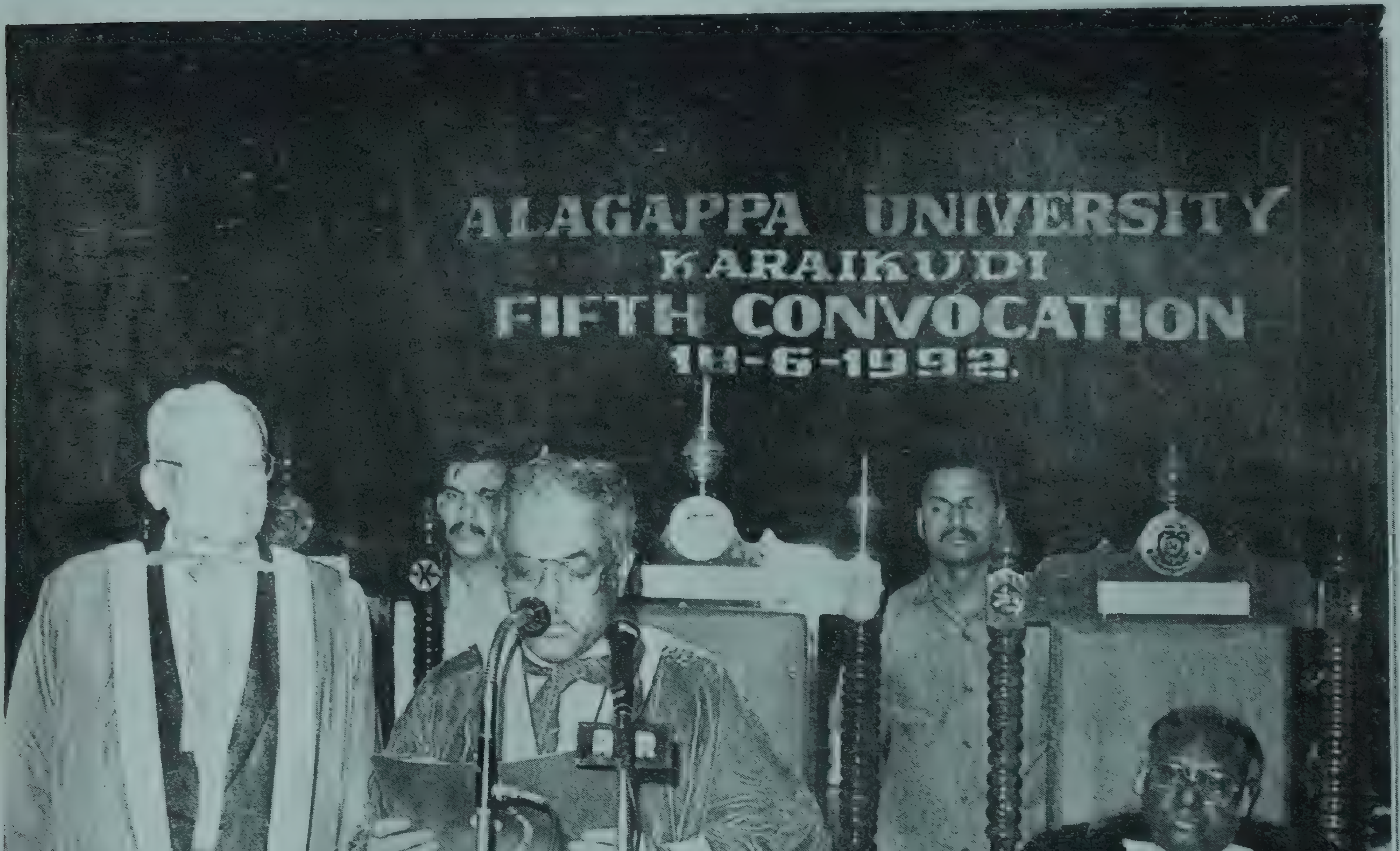
INTERIM ENQUIRIES WILL NOT BE ENTERTAINED.

Date of commencement of issue of application forms : **8.10.1992(Thursday)**
Last date for supply of Application Forms : By Post : **2.11.1992(Monday)**
At the Counter : **9.11.1992(Monday)**
Last date for receipt of completed Application Forms : **9.11.1992(Monday)**

Asstt. Registrar (PGS)

UNIVERSITY NEWS, MONDAY, OCTOBER 19, 1992 Regd. No. R.N. 7180/63 Postal Regd. No. DL-11106/92

Alagappa Varsity Convocation



Dr. C. Aranganayagam, Education Minister of Tamilnadu and Pro-Chancellor of Alagappa University, speaking at the fifth annual convocation of the University. Seated on his left is Justice A.R. Lakshmanan, who delivered the convocation address, Dr. K. Nagappan, Vice-Chancellor, is on the extreme left.

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C.F.T.R.I. MYSORE

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University News

MONDAY, OCTOBER 26, 1992

Rs. 5.00

HAU Convocation

Shri Dhanik Lal Mandal, Governor of Haryana & Chancellor, conferring the degree of Doctor of Science (Honoris Causa) on Dr. Manmohan Singh, Union Finance Minister, who delivered the convocation address at the Chaudhary Charan Singh Haryana Agricultural University. Dr. A.L. Chaudhry, Vice-Chancellor (centre) and Shri Sanjiv Kumar, Registrar, are also seen in the picture.

SANJAY GANDHI POST GRADUATE INSTITUTE OF MEDICAL SCIENCES,

POST BOX NO. 375, RAEBARELI ROAD, LUCKNOW-226 001 (U. P.)
EPABX NO. 51200, 53700, 54800, 55800 FAX 0522—51993

Advt. No. 31/92

Last Date : 20.11.1992

ADMISSION & APPOINTMENT

Applications are invited on prescribed form from qualified Indian nationals desirious of admission/appointment to various Post- Graduate courses/Residency (Hospital Services) programmes of the Institute commencing from January 1993 :

Sl. No.	Department/Speciality	No. of Seats D.M./M.Ch.	No. of Seats SR(HS)	Qualifications
1.	Cardiology *	3	—	M.D. (Medicine or Paediatrics)
2.	Cardiovascular & Thoracic Surgery	2	—	M.S. (Surgery)
3.	Endocrinology (Med.)*	2	—	M.D. (Medicine or Paediatric)
4.	Gastroenterlogy (Med.)*	3	4	M.D. (Medicine or Paediatrics)
5.	Gastroenterology (Surg.)	3	2	M.S. (Surgery)
6.	Nephrology*	3	1	M.D. (Medicine or Paediatrics)
7.	Neurology	2	—	M.D. (Medicine or Paediatrics)
8.	Neurosurgery	2	4	M.S. (Surgery or Orthopaedics)
9.	Neuro Ophthalmology	—	1	M. S. (Ophthalmology)
10	Urology	3	—	M.S. (Surgery)
11.	Anaesthesiology	—	8	M.D. (Anaesthesia)
12.	Microbiology	—	3	M.D. (Microbiology)
13.	Nuclear Medicine	—	2	M.B.B.S. with D.R.M.
14.	Pathology	—	3	M.D. (Pathology)
15.	Radiology	—	3	M. D. (Radiology)
16.	Radiotherapy	—	2	M.D. (Radiotherapy)
17.	Transfusion Medicine	—	2	M.D. (Pathology/M.B.B.S. with Ph.D. in Transfusion Medicine).

*One seat for Paediatrics for admission to D.M. Courses.

GENERAL CONDITIONS :

1. Candidates are requested to apply on prescribed forms available alongwith prospectus and instructions which can be obtained from the office of the Dean either by hand or by post on payment of Rs. 25/- through Bank Draft in favour of Director, SGPGI (S.B.I.-7789), Lucknow and a stamped (Rs.13/- only), self addressed envelope (size 10" by 12") latest by **10th November, 1992.** Candidates must write on the top of the envolope the advertisement No. and the speciality for which the application has been made.

2. The examination for admission to D.M. and M.Ch. courses will be held on **6th & 13th December, 1992,** Respectively, the candidates are required to report at 10.00 a.m. in the Central School premises of this Institute. No seperate call letters will be issued. For post no. 11 to 17, sepreate interview will be held.

DIRECTOR

KAPOORIA

C.F.T.R.I. MYSORE

UNIVERSITY NEWS

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Editor :
SUTINDER SINGH

Financing Higher Education in India

Squaring the Triangle of Quantity, Quality and Equality

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The process of rapid expansion of higher education in India is proving to be self-defeating, apart from being a drag on the economy in terms of resources it sucks and the return it offers. This is due to the fact that the Government has so far failed to evolve a financial strategy whereby the conflicting demands of quantity, quality and equality could be reconciled in the higher educational system.

An unprecedented and phenomenal expansion of higher education over the last four decades is the single-most important event to have occurred in education in India. After Independence, new areas were opened for developing human potential and expertise which could be harnessed for promoting economic growth. The Government in India, in coordination with the state governments, was anxious to take immediate steps for a radical reform of the elitist character of the higher education system, a legacy of the British government. The government was keen on bringing within its fold the majority of youth who had long been deprived of their basic right to education. The twin-objectives of (a) making available sufficient middle and upper level trained manpower to aid economic development, and (b) meeting the rising expectations of the vast sections of the young people, added some new dimensions to the policy of development of higher education in the country.

Over the last four decades, higher education system in India has been forced to enlarge itself to serve a growing number of students. Quality has suffered as a consequence. Inadequate financial resources has further aggravated the deteriorating quality. The government has yet to evolve a strategy whereby the triangle of *quality*, *quantity* and *equality* can be squared as far as possible by working out a harmonious programme that will be the best in national interest. The simultaneous pursuit of these three perhaps not-easily-compatible-objectives is proving to be a difficult task. The more the quantity, the less it favours quality and vice-versa; and the less the resources, the more difficult it becomes to equalise higher educational opportunities. The problem needs the deepest thought at planning and policy-making levels, and in academic circles.

Quantitative Overflow

It can be safely said that India has, to a large extent, achieved the first objective of quantitative expansion. The country is currently maintaining over 190 universities and 7000 colleges with an intake of nearly 5 million students, as compared to 17 universities and 636 colleges with an enrolment of 2.5 lakhs at the time of Independence. The number of new entrants every year is equal to what the total number of students was just prior to Independence! Although the percentage of enrolment to the relevant age-group population (17-23) is low (six percent), India, as compared to other countries, has a larger number of students which may even exceed the individual population of some countries. Every eighth student enrolled in higher education in the world is an Indian. Nearly 3 lakh teachers are engaged in the system. India now operates the third largest higher educational network in the world though paradoxically, over 50 percent of its people remain virtually outside the purview of the present system of education! As J.P. Naik aptly put it, "the post-Independence period may be described literally as the era of 'higher education' in Indian educational history. It (higher education) is also the one sector of education which has expanded most".

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Access to higher education in India shows no definite pattern or plan. It is subject to social pressures originating mainly from middle and upper income groups. The liberal government subsidy, which reduces substantially the cost borne by students/households, adds to the pressure of demand for higher education. (It is a fact that liberal subsidy exists in some developed countries too, but it is coupled with a policy of rationing seats in higher education either directly in terms of numbers, or indirectly via admission standards). Besides, political pressures act particularly at this level of education in India, and even have become power-centres therein, forcing the system to move in an undesirable direction. Such pressures are out of line with priorities of national development – often running against those priorities – and changing social needs. The setting up of a college/university has become a status symbol for the concerned town/district and the authorities have always yielded to such pressures. The demand for higher education continues to grow and is being substantially met in disregard of the aspirant's aptitude/merit.

The government meets about 80 percent of the expenditure on higher education (40 percent in 1947) while student-fees cover only a merely 12 percent (46 percent in 1947); and the rest (8 percent) is met by contributions from other private sources such as donations, endowments, etc. Consequently, over the years, the relative contribution of students has declined steeply and the tax-payer support has doubled. College/university fees have been kept frozen for the last so many years in many states when expenditure has increased by leaps and bounds. These institutions charge fees that are a fraction of what some private primary/secondary schools charge*. Since the cost of higher education is negligible, the students/parents/guardians do not naturally demand *quality* higher education; they pick up for almost free *whatever* is made available to them. The budgeting of fees was in fact started in India during the British period as an expression of the principle that "people do not value anything which is given free and that the payment of fees is an indication of the seriousness of purpose on the part of the student or his guardians". (*Woods Despatch*, 1854).

The contributions from other private (non-governmental) sources by way of donations, endowments, gifts and other charities for higher education too have constantly been on the decline, largely owing to the laxity of the institutions in tapping these sources. The private sources of finance for higher education, in short, have ceased to make any appreciable contribution to higher educational development. As a result, instead of a 'mixed' subsidy-fee system, almost a 'pure subsidy' system has emerged over the years. This was certainly not the role envisaged for private agencies when the grant-in-aid system for higher education was originally adopted in the country years ago. The idea then was both government and private enterprises would have *complementary* roles in the development of higher education.

The excessive financial dependence on the Government has resulted, more than anything else, in pushing many university/college activities into the cobwebs of government decisions – and some universities found to be even willing to give up considerable autonomy in return for more state funding. While complaining about greater governmental interest and involvement in their affairs, few academics care to ask how such a situation has come about. There is an inherent danger in leaving too many problems for the government to solve.

Financial Squeeze

Although government contribution has steadily increased over the years, it has not however kept pace with the rapid rise in enrolment and escalating costs. Enrolment is guided by different sets of considerations from those that govern the flow of funds.

Continuous expansion has wide financial implications than is generally realised. Expenditure is bound to be high, particularly in the context of diversified courses; professional/technical courses especially, are highly expenditure-oriented as compared to general types. Also recent years have witnessed an escalation in expenditure due to the rise in salaries of teachers and outlays on buildings, hostels, laboratories/library books/journals, equipment and other research and teaching tools. Probably the likely growth of expenditure in colleges/universities had been underestimated by the policy makers. It has grown much more rapidly than on other educational levels. Any measure to expand higher education without a prior examination of its cost consequences (and impact on quality), could be self-defeating.

The formulation of appropriate methods of financing higher education has so far not been accorded the importance it really deserves by the policy-makers and the institutions. This has brought in its wake some serious problems. Since the late eighties, a serious financial crisis has been looming large over the higher education sector as the government finds it difficult to provide adequate funds even as private sources of funds wither away. In fact, higher education no longer figures prominently on the list of priorities of many state governments. There is a feeling among public authorities that it has already got more than its fair share in the education budget. As the evidence shows, lower levels of education (especially elementary education) are likely to get a preferential treatment in future. The higher educational institutions themselves have so far made little effort to establish a closer rapport with the community and create an awareness of the financial constraints, pressures and challenges they have been facing in recent times.

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* *Recently the Pawar Committee set up by the Government of Maharashtra recommended that the tuition fees should be equal to 30 percent of the amount spent on each student by the state government and the increase in fees be brought about in a phased manner – over a period of four years. The Government from this year, has implemented it. This fee-hike, it must be noted, was enforced after a period of 14 years.*

Qualitative Deterioration

The break-neck speed with which the higher education system has expanded over the past four decades has led to a fast deterioration in quality. Academic standards have been watered down to accommodate more and more students, ignoring the fact that only if the 'quality' of the people supplied by the system ensured certain minimum standards of competence, they can help the process of economic modernisation. The open door admission, irrespective of merit, has meant putting more on the race track, reducing the values of those that got ahead; the better have become worse off as more and more of the worse joined them. Quality is also being traded-off against quantity by spreading scarce financial (and academic) resources thinly over larger numbers and wider areas. In higher education, there is an inverse relation between quantity and quality, especially in a situation of financial scarcity. The establishment of more and more institutions has resulted in the gradual impoverishment of the existing ones. To meet the rapid increases in demand, facilities are stretched to breaking points. Most state universities/colleges are in dire financial straits and are forced to effect savage cuts in budgets especially on books/journals, laboratories, equipments, etc. with harmful effects on quality. *The accent is on survival, not development.* One wonders sometimes whether it would have been better to have a few but well-financed institutions than to have a large number of starving ones.

The vitality of a higher education system is not measured in terms of the number of students enrolled, or institutions established, but by the quality of the people it brings out. In fact, this constitutes the essence of human resources enrichment. Higher educational planning can be meaningful only when the policy makers spell out clearly the qualitative aspects. They should indicate ways of achieving excellence, and the priority that should be accorded to it. This aspect has not so far received as much attention as it deserves; and therefore the entire process of expansion is proving to be counterproductive. The Government of India Document "*Challenge of Education*" (1985) had observed that "the national strategy of education has to ensure the availability of highly educated, trained and motivated manpower for dealing with the challenges which are inherent in the modernisation and globalisation of the economy". It had further asserted that "India has to be able to compete with the most advanced countries in many fields of production to hold its own". Any nation which aspires to become industrially competitive of an international standard over the coming two or three decades must have a pool of skills that can be drawn upon when needed. The National Policy on Education (1986) has admitted that "in the context of the unprecedented explosion of knowledge, higher education has to become dynamic as never before, constantly entering unchartered areas. Urgent steps will have to be taken to protect the system from degradation..... It is important to ensure that those at the top of the pyramid are among the best in the world". All these are good objectives but they cannot be attained unless qualitative changes are introduced in the system. If the system fails to achieve this objective, it would mean forfeiting its right to public support.

Quality of higher education, among other things, depends upon the individual institutions allocating resources at their disposal efficiently and economically, as well as the economies of scale to be realised, etc. In a situation of resource constraint and high cost of the provision of higher education, the efficiency objective assumes considerable weightage. There is a continuing need to discover the benefits of different lines of action, and see that the resources flow to appropriate channels. Universities/colleges and other institutions will have to devise adequate academic and administrative procedures for the appropriate and effective utilization of available resources and institutional aids. The institutions could also show more dynamism with regard to the functioning of their auxiliary enterprises and convert them into sources of funds.

The question of how well the higher educational expenditures are being apportioned between different 'objects' or 'items' from the point of qualitative improvement is no doubt very important in the above context and needs to find a place in the agenda of discussions among planners and policy makers. An analysis of the shares of different items of expenditure in total (recurring) expenditure on higher education (for which data are available in *Education in India* Ministry of HRD, Govt. of India) reveals that expenditures on 'non-teaching' and other unspecified items have been growing rapidly thus leading to less expenditure on teaching/academic staff, equipment and appliances, libraries, laboratories, etc. or, in other words, on real *academic* activities or *qualitative* aspects of higher education. The allocation for the latter items has naturally to be relatively high, but it is showing a tendency to decline. It is found that in many universities more than 50 percent of the expenditure on 'salary account' is due to non-teaching (administrative) staff. In the case of professional categories of higher education, which have acquired an important position in the country, the share of expenditure on equipment and appliances, laboratories, etc. has fallen quite significantly over the years. With the resource crunch that is being witnessed in recent years, higher educational institutions have been forced to cut expenditure on many items, but the axe has fallen mainly on programmes that have high academic value – and in the case of universities, especially on research activities. Considering the age and present scale of the enterprise of education, the level of its investment in serious and sustained research and development is shockingly low.

If the objective of higher education is achievement of excellence, more financial outlays will have to be apportioned to real academic activities such as teaching/research, libraries, laboratories, equipment and appliances, etc. It is a sad commentary on Indian higher educational set up that only a relatively small portion of funds is made available to them. Innovations are undertaken by the UGC and other agencies from time to time, but they are abandoned long before they are known to have succeeded or failed. The system has thus failed to provide an environment conducive to the growth of excellence. As the Education Commission (1964-66) rightly observed, "many of our educationists and public men have, however, not fully realised how serious are the actual conditions, academic and physical, in the colleges and universities". That the situation has not changed materially even after 25 years since the Commission pointed this out, can be seen in the observation made in the *'Challenge of Education'* Document (1985) and in the NPE (1986).

Equal Access : A Myth?

If quantitative explosion is seen as a means of promoting equality of opportunity, or making easier the access to higher education for the lower income groups, one can safely say that it has failed. *The so-called higher educational boom, instead of equalising opportunities, has in fact legitimatised, or even aggravated, inequality over the years.* Most of the seats in the existing higher educational institutions have been appropriated by those belonging to middle and upper income strata of society (and this is ultimately transferred to key areas in the economic and administrative system), leaving the vast masses out of the ambit of benefit. Over two thirds of India's university/college entrants come from the top 30 percent of the society. Those that really come from 'poor' families, may not be more than 10 percent of the total student population. Under the existing system, everyone is entitled to the same amount of the generous public subsidy regardless of his/her capacity to pay. For the majority of the students it has meant money that their parents or they could well have afforded, while for others, the minority, it (subsidy) is inadequate and they are not, therefore, in a position to take advantage of university/college education. The main reason for keeping fees low in higher educational institutions is to help the poor families and promote equity, but what has taken place over the years is the monopolising of seats available by the well-to-do classes in the society. Naturally two-thirds of the portion of subsidies go to the "haves". And it is paradoxical to note that the more expensive the course one pursues – medicine, engineering, etc. – the greater is the subsidy, and it reaches mostly those who need it the least. To cap it all, a good number of those who manage to obtain access to and get good grades from the heavily subsidised professional/technical institutions, more often than not, go abroad on the pretext of higher studies only to settle there, thus enabling those countries to reap the benefits of our investment. Here a question arises: Is India deriving benefits commensurate with the generous subsidy extended to those students? Under the existing situation, to defend government subsidies for higher education (on low fee-rates) on the ground of social and economic justice is, therefore, a monstrous perversion of truth.

If equality of opportunity has to be really effected at the higher education level, sincere efforts will have to be directed towards enlarging the intake of children from lower strata of society at the school level (and bringing down the tremendous wastage on account of dropouts) and extending more scholarships/freeships to them when they reach the college level. The institutions should devise proper methods to identify such students who need this special treatment.

Looking Ahead

In a changing environment where market is coming to play a dominant role in the allocation of resources, and subsidies are being dispensed with to curtail budget deficit, it is hard to see how the twin objectives of *equality* and *efficiency* can be achieved in the near future. The possibility of the government (both at the central as well as state levels) coming to the aid of higher education in a big way, at the cost of other pressing national objectives including the universalisation of elementary education and eradication of illiteracy in the country, seems remote in the years ahead. In these circumstances, the gap between the expected requirements and the possible allocation of resources from public funds to meet them is likely to widen substantially over the coming years, particularly in the context of the new goals set out in NPE (1986). The deleterious consequences of this erosion are now becoming painfully clear and higher educational administrators are being forced to do some tight-rope-walking in order to bring the budget into balance with available resources. If the current situation is so chaotic, it is anybody's guess as to what can forseeably happen in the not-too-distant future! *Unfortunately, the gravity of the situation has received little attention from the academic and the student community; it is more than likely that either they have got reconciled themselves to a perpetual shortage of funds (and consequently deterioration in quality), or they have failed to realise the dangers that loom ahead.*

The conventional assumption that only government can alleviate the acute financial crisis has to be overcome because, as stated earlier, the overwhelming demands placed on it are too great for it to come to the rescue of the higher education sector. An increasing support from non-governmental (private) sources will have to be sought in the years to come if the system is to survive. The institutions should devise some innovative and unconventional ways of raising funds. This would help the institutions not only to scale down the over-dependence on the government but also to redeem their seemingly lost position and prestige, and their autonomy. They should also make some sincere efforts to raise more funds from *within* the system itself, besides making cost savings by trying a number of financial reforms. This does not mean total privatisation of higher education. One only argues for supplementing government funds, since government support cannot be entirely dispensed with. Then there is also a danger of politicisation of higher education in the eventuality of total privatisation. This is seen in states like Maharashtra, Karnataka, Andhra Pradesh and to some extent in Tamil Nadu where private enterprise has already begun to tighten its grip on professional courses like medicine and engineering. Such private (unaided) institutions have become moneyspinning sources for the local politicians. Instead of serving public interest, they have become illegitimate commercial conduits for private profits. The state governments have not framed proper rules/regulations for granting affiliation, admission of students, recruitment of staff, provision of infrastructural facilities, maintenance of academic standards and conducting tests/examinations; neither is there a system of 'accreditation' providing for periodic mandatory monitoring and review of the programmes of private institutions which will make them accountable to the user and the community. One argument put in favour of privatisation (including by some Chief Ministers) is that such a measure will cut down the draft on the scarce resources of the government, especially when these resources are urgently needed for priority areas like elementary education, adult literacy and vocational courses; also it will relieve enrolment pressures on regular government/government-aided colleges, but it lacks conviction.

It is true that some of the finest higher educational institutions in advanced countries have been established, financed and managed by private enterprise or a consortium of business donors, and the community has greatly benefited from it; and the laws in these countries allow substantial tax benefits for private contributions towards promotion of education. These self-financing private institutions do not compare unfavourably with regular government-aided institutions in the matter of standards; they also attract the best talents. In fact such institutions are now being preferred in some countries because there is far less bureaucratic control than is experienced in regular government-aided institutions and there is more openness towards new knowledge, innovation and creativity on the part of the teachers and students. Besides business leaders in these countries have come to believe in the *social responsibility of business* – a phrase that has become very popular there. They are volunteering to support educational activities purely from philanthropic and altruistic motives. They have accepted the fact that wealth and economic power entail some responsibility for the welfare of the community – what comes from the people must go back to the people; the wealth generated by the industry must be used for the benefit of the people. Unfortunately, such a spirit for common good is absent in India: barring half-a-dozen top business houses, the majority has not yet realised their financial obligations towards the cause of education. It is because of their indifference, or lack of initiative, in providing educational services that private trusts (most of them linked to political leaders/activists) have mushroomed to fill the vacuum by setting up private (unaided) colleges and (most of them ill-equipped and flouting basic academic norms) which *sell* higher education to the highest bidder. Total privatisation may be a solution to the ills in other sectors of our economy, but certainly the time is not yet opportune for taking such a step in the field of higher education in India, as the functioning of a number of private institutions shows so painfully. (Anyway, the Union Minister for Human Resource Development has, in a recent statement, ruled out privatisation while recognising the need to *supplement* state efforts in higher and technical education by encouraging private 'initiative' in the light of 'constraint of resources".

To sum up : A realistic approach to the financing of higher education has yet to take shape in India, although the inherent limitations of the existing pattern have been noted time to time. Some alternative funding strategies have been recommended by experts in the field which would not only help generating more resources but also make the system less regressive, but these have not received due attention so far. The time has now come for the policy makers (at the centre and state levels), reputed academics and administrators to consider this question and evolve a financing strategy whereby it would be possible to square the triangle of quantity, quality and equality. A serious public debate on this question will be a good beginning. There however appears to a be a general agreement, at least among the economists, that the present arrangement under which liberal subsidy is extended to all uniformly regardless of students' capacity to pay, is neither equitable nor efficient. However, the subsidies can be reduced effectively only after a consensus is reached. In view of the intense opposition to such a step, policies have to be designed in such a way that (a) there is a link/trade-off between the reduction in subsidy and the allocation of the resources thus saved to qualitative upgradation in the higher education sector, and (b) more scholarships/freeships and/or student loan facilities are extended to those who deserve them on merit and poverty consideration. Complete removal of subsidies may however, not be justified. The existence of 'social benefits' of higher education, even though they may defy exact monetary computation, justifies the need for some public action and for the government to share part of the expenditure.

Unless some steps are taken to devise a bold and new strategy for financing higher education in the country, the dream of transforming the system into "one vibrant with a commitment to development and change" or "dynamic as never before" will remain unfulfilled.

References

Adiseshiah, Malcolm, S., "Educational Financing", **Lead Paper presented to the Seventh Commonwealth Education Conference at Accra, Ghana**, March 1977.

Ansari, M.M., "Resource Allocation and Financial Accountability of Universities", **University News** (Special Number), October 2, 1989.

Azad, J.L., "Financing Institutions of Higher Education in India: The Need for a Realistic Fee Policy", **Higher Education** 5 (1976) 1-7, Amsterdam.

______"Educational Finance in India: Progress, Problems and Perspectives", **Indian Journal of Public Administration** Vol. XXXII, No.3, July-September 1986 (Special Number on Education Policy and implementation).

_______Higher Education in India – The Deepening Financial Crisis, Radiant Publishers, N. Delhi, 1988.

Balachander, K.K., "Higher Education in India: Quest for Equality and Equity", **Mainstream**, August 2, 1986.

________"Resources for Higher Education: The Role of Different Sources and Their Dynamics", Paper presented at the **J.P. Naik Seminar on Education for All**, Indian Institute of Education, Pune, September, 1986.

________"Wanted: A New Strategy for Financing Higher Education", **University News**, July 20 and 27, 1987.

________"Why Public Expenditure on Higher Education"?, **University News**, (Special Number), Dec. 5, 1988.

________"Financing Higher Education – A Public Economic Perspective", **Mainstream**, March 25, 1989.

________"Government–Varsity Partnership", **University News** (Special Number), Oct. 2, 1989.

________"Funding of State Universities in India: Some Crucial Issues", **Journal of Educational Planning and Administration**, Vol. V, No. 3, July, 1991.

________"Higher Education in India – Quest for an Alternative Financing System", **University News**, February 3, 1992.

Bhagwati, Jagdish, "Education, Class Structure and Income Equality", **World Development**, Vol. 1, No. 5, May, 1973.

Bharadwaj, R., Changing Global Scenarios: Implication for Education", Asian Programme of Educational Innovation for Development (APEID), Occasional Paper, No. 4, Bangkok, April 1980.

________and Balachander, K.K., "Higher Educational Planning and Administration: The Challenge of Change", **Journal of Education and Social Change** (IIE), Vol. II, No. 3, Oct.-Dec. 1988.

Blaug, Mark, "The Overexpansion of Higher Education in Less-Developed Countries – And its Remedy", **Paper submitted to the Rehovath Conference on Economic Growth in Developing Countries**, September 1973.

________"Economics of Education in Developing Countries", **Third World Quarterly**, Vol. I, No. 1, Jan. 1979.

Carter, Charles, **Higher Education for the Future**, Basic Blackwell, Oxford, 1980.

Edding, Friedrich, "Student Aid-Concepts, Objectives and Methods", in **Financing of Education for Economic Growth**, OECD, Paris, 1964.

Gore, M.S., "Financing Higher Education", **University News**, June 1, 1986.

India, Government of, **Report of the Education Commission**, 1964-66, Ministry of Education & Culture, N. Delhi.

________**Challenge of Education – A Policy Perspective**, Ministry of Education, N. Delhi, Aug. 1985.

________**National Policy on Education-1986**, Ministry of Human Resource Development (Department of Education, N. Delhi), May 1986.

Jallade, Jean-Pierre, "The Financing of Education: An Examination of Basic Issues", Working Paper No. 157, IBRD, Washington, July, 1973.

Jimenez, Emmanuel, "The Public Subsidisation of Education and Health in Developing Countries: A Review of Equity and Efficiency", **Research Observer** (World Bank), Vol. I, No. 1 Jan. 1986.

Khadria, Binod, "The Subsidies Question in Higher Education: Tight-Rope Walking for Public Policy Makers in Developing Countries" **Journal of Educational Planning & Administration**, Vol. 3, Nos. 1 & 2, Jan.-April 1989.

Kurup, M.R. and Thatte, R., "Pricing of Higher Education – A Case Study of Maharashtra", Vaze Research Group, Vaze College, Bombay, 1991 (to be published).

Naik, J.P., **Educational Planning in India**, Allieds, Bombay, 1965.

________"Higher Education in India: Some Suggestions for Reorganisation", Princess Leelavati Lecture, University of Mysore, January, 1972.

_______**Equality, Quality and Quantity : The Elusive Triangle in Indian Education**, Allieds, Bombay, 1975.

_______**Education Commission and After**, Allieds, Bombay, 1982.

Nanjundappa, D.M., "Some Critical Issues in Planning and Management of Higher Education, **University News**, June 15, 1983.

Panchamukhi, P.R., **Economics of University Finances: Basic Principles and Practice**, Centre for Multi-Disciplinary Research, Dharwar, 1977.

________"Financing of University Education: Some Basic Issues", Paper presented at the **National Seminar on Higher Education and the Future**, University of Bombay, Dec., 1983.

_______"**Economics of Educational Finance – Studies in Educational Reform in India**, Vol. V (Indian Institute of Education), Himalaya Pub. House, Bombay, 1989.

Sharma, G.D., "Alternative Methods of Financing Higher Education" in Singh, Amrik and Sharma, G.D. (Ed.), **University and College Finances**, AIU, New Delhi, 1981.

Singh, Amrik and Sharma, G.D. (Eds.), **University and College Finances**, AIU, N. Delhi, 1981.

Tilak Jandhyala, "Educational Finances in India", **Occasional Paper** NIEPA, N. Delhi, 1987.

________"Financing of Higher Education in India", Paper presented at the Research **Seminar on Reform and Innovation in Higher Education**, held under the auspices of the S.N.D.T. University, Bombay, and the State University of New York, 1991.

________and Varghese, N.V., "Discriminatory Pricing in Education", **Occasional Paper**, NIEPA, N. Delhi, 1985.

Raising the Quality of Doctoral Research in Our Universities

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During the last seven months from February to August this year the Syndicate of the University of Calicut has approved the award of Ph.D Degree to 45 candidates. The subject-wise split up of the candidates recommended for Ph.D Degree is as follows : Arabic 2; Botany 4; Biochemistry 2; Commerce 1; English 1; Education 4; Engineering 1; Hindi 3; Malayalam 4; Psychology 4; Physics 1; Sanskrit 6; and Zoology 10. Quantity-wise this should be considered an achievement, particularly so, since the number of active researchers pursuing their Ph.D. Studies at any time in the University does not normally exceed 150. Of the present active research scholars about 100 candidates are working in various departments and centres of the University as full-time regular students, most of them with some fellowship, meritship, stipend etc. The remaining are part-time candidates, none with fellowship or stipend, but many of them are partly or fully employed. Enquiry revealed that most of the full-time regular students have been working for a year or two and only very few of them have crossed the third year time frame. The same thing cannot be said about the part-time candidates, since most of them are employed, mostly as teachers or as assistants in some projects, the progress is rather slow. In any case the approval of 45 theses for the award of Ph.D Degrees from out of 150 plus registered candidates is credit worthy.

All these Ph.D works belong to the category of junior level research. It is found that most of these research works have been carried out for the purpose of getting a degree. Most of them remains unpublished either partly or fully and are likely to remain so. For the plain fact is that after taking the degree, the candidates do not pursue the same line of research which they have initiated during the Ph.D work and therefore, do not often bother to publish the work as either they have lost interest in it or are not able to concentrate on it in the new circumstances of change of job or of non-availability of facilities to follow up the work. This would mean that most of the junior level research in the universities never find the day light and they are practically lost, though together they could have contributed substantially to the generation of new knowledge. The amount of money lost by way of unproductive fellowship, stipend etc. is also considerable.

While this is the fate of the junior level research, a look at the senior level research is much more revealing. Generally speaking, the trend at this level is just inversely proportional to that of the junior level. While the latter has been quite productive, atleast quantity-wise, there is little productivity at senior level research. This is what one is forced to conclude from the number of publications produced by senior faculty members or other types of academic activities in which they participated and/or conducted under their leadership. Senior level research in the University seem to be drying up and this is just the reverse of the trend we found at the junior level. This trend is all the more dismaying since the senior faculty represents the top academic leadership of the University. The reputation of any department among fellow academicians and the public is dependent mostly on their performance and both the junior faculty members and the students look forward to them for active leadership in research and teaching and also see in them models for emulation or rejection. Reasons for this deterioration in research output at senior faculty level are many and cannot be dealt with in this paper. What we have to notice here is the inverse proportion between the research efforts and outputs at junior and seniors levels is very visible in many university departments.

Probably a little more productivity can be seen at the middle level as evidenced in the number of papers published by them and by the number of seminars, conferences etc. in which they sought participation. The middle level faculty member represent a relatively small group which often does not have decisive voice in determining the course of events in the departments.

We have to take this trend reversal in research efforts and outputs between the junior and senior levels into account when we consider the problem of raising the quality of research leading to Ph.D. Degree in our universities. To guide Ph.D. scholars, the guides should themselves be serious researchers in the first instance. No doubt, many of them are good scholars. But their scholarship and research efforts seldom find expression in the form of published works or other consistent academic activities. Hence the reverse trend between the junior and senior levels of research outputs is visible in many of our university departments. Therefore, one sure remedy to raise the quality of research leading to Ph.D. Degree in our universities calls for conscious efforts on the part of senior and middle level faculty members to deliberately try to increase their own research efforts and outputs. It is a well known maxim that one is what one does, as evidenced by the practical results of his actions. Serious and consistent endeavours by faculty members towards increasing the quality and quantity of research pursued in the departments under their control would instantly change the academic atmosphere of that department. Guiding is not merely advising and counselling. It is actually the holding aloft of a brilliant lamp and showing the same to the young researchers. In the light of such lamps the students should see things for themselves and move forward in their own directions of discovery and self expression. Showing the light could take various forms, like total devotion to one's own field of research work which then becomes ideals models for the young scholars who watch such serious academic pursuits at close quarters. It could also take the form of constant academic discussions with research scholars about one's own research pursuits and the consequential results both of which would invisibly but incisively move and inspire the youngsters to pursue their own lines of research with vigour. Such intimate and well meaning relationships between the guide and the guided would result in tremendous upward jump, both in quantity and quality of the research activities undertaken in the department. In the absence of such relationship models are not seen, intimate insight into or comparison with attainable excellence becomes impossible and research efforts at junior levels are simply reduced to unilinear pulls towards the preparation of Ph.D. thesis.

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Further, continuous and devoted researches and publication of papers, monographs, books, etc. by senior and middle level faculty members create a genuine research culture within the department. Such lofty culture in turn, becomes instrumental for further enhancing the quality of investigations pursued. In fact, it is only through the creation and gentle cultivation of a research culture in the department that we can think of attaining any improvement in the quality of research leading to Ph.D. Degree. The absence of this type of environment will inevitably lead to stagnation, frustration and finally to degradation of standards in the research efforts and outputs.

Another sure way to enhance the quality of research in our laboratories is to organize research activities around real needs of our time and place. It is a well known fact that the topics for Ph.D. research are now chosen in such a way that they help in the preparation of the theses in the quickest way possible. Neither the substantial worth of the contents nor their relation with the needs of the society are given any consideration in determining the title of research. Very often titles for research are not worked out or developed by the students but are given to them by their guides. Ph.D. researches, therefore, become simply title-oriented and not life-oriented nor problem-oriented. As a matter of fact, the tittles for Ph.D. research should grow naturally from out of major research concerns that are pursued by the guides in their respective areas of specialization.

In such a situation, the junior level researches will be complementary to senior level researches and they will enrich each other besides contributing together substantially towards enrichment of the whole human knowledge in the respective field. Such collectiveness and relatedness are lacking in our laboratories. Hence the poor quality of research pursuits. A new academic dynamism and intellectual recommitment on the part of faculty members could certainly help to change the present pathetic situation.

Research is essentially generation of new knowledge – even though in a limited way. It is true that such new knowledge cannot easily be quantified. But relative merit of research contributions can easily be assessed, if substance of the Ph.D. theses could be published and made known to those who are interested. As mentioned at the beginning of this paper, most of the Ph.D. researches now remain unpublished and this is sufficient reason for those who produce such literature not to bother too much of their quality. It is conceded that the large number of Ph.D. theses approved each year by the universities in India cannot be published because of their bulkiness. But atleast the summaries of the contributions should be published by the university concerned. Calicut University is making such a beginning this year. It has already decided to compile and publish brief summaries of all the theses approved for Ph.D. Degree during the year 1992 in the form of a single consolidated volume. When the substance of thesis is published in 3-4 printed pages in as much non-technical and simple languages as possible, the real merit of the contribution can be assessed. Such an assessment will serve as an incentive to improve the quality of research pursued at the junior level.

The ideas and suggestions made in this paper are not exhaustive. However, it is hoped that they would stimulate meaningful discussions and introspection amongst the Ph.D. research scholars and amongst the faculty members who guide research activities within their departments.

What Ails Higher Education?

Probable Remedies

A Case Study of Sri Sathya Sai Institute of Higher Learning, Prasanthinilayam (A.P.)

P.H. Sethumadhava Rao*

The history of Indian higher education from ancient times spreads over more than two millennia. Many qualitative and quantitative changes can be seen in the scenario. Growth of higher education has been complex in our country. Rich tradition of learning predominantly religious in character was main characteristic of our education in ancient India. In North, we had the famous centres of higher learning at Takshashila, Nalanda and Vikramshila, and Ghatikas, Buddhist Viharas and Jain Pathas in South. System of education in ancient India was mostly in *Gurukulàs* where there was a close relationship between the teacher and the taught. Subjects like astronomy, philosophy, music, arithmetic, sanskrit (Vedas, Upnishads, Ramayana and Mahabharata) were taught.

In medieval period there were major social and cultural changes. With *Pathsalas*, the *Madarasas* came into existence. Muslim rulers built mosques, *sarais*, and *Madarasas* as signs of growth. Scholars of repute produced during that period enjoyed prestige and political patronage.

During the colonial period, the system underwent a radical change in its shape, size and contents. The first three universities were established at Calcutta, Bombay and Madras in 1857. Punjab University was started at Lahore in 1882 and the University of Allahabad came into existence in 1887. During this period, higher education was greatly influenced by British model. The main purpose was to have a class of educated Indians who could act as interpreters of the British people to help them rule India effectively.

Gandhiji, set up a number of institutions during non-cooperation movement in 1920. These were Gujarat Vidyapeeth, Ahmedabad, Kashi Vidyapeeth, Varanasi, Tilak Vidyapeeth, Pune and Jamia Millia Islamia, Delhi. The focus of these institutions was to build strength for national movement.

By 1947, the number of students in colleges and universities were 2.5 lakhs out of a population of 350 million. 80% of the enrolment was in undergraduate courses in arts and sciences and a very few in professional subjects.

As of today, there are 199 universities (including deemed to be universities) and over 7000 colleges. The student enrolment in 4 millions – 89% for graduate courses, 10% for postgraduate courses, and 1% for research. 40% enrolment is for arts, 21% for commerce, 19% for science and rest for technical and medical courses.

If one were to examine the tremendous growth in higher education, the following weaknesses can be seen :

i) The proliferation is unplanned;

ii) Infrastructural facilities such as buildings, teachers, etc. are inadequate;

iii) There is a mismatch between education and employment. There is no planning in setting up of new universities/colleges as these are political decisions. This results in frustration which is the main cause for unrest in the university/college campus;

iv) As a result of vast increase in the number of universities/colleges, the country has to face the problem of underemployment and unemployment. There is also a situation of unemployability. More than this, the standards are getting diluted;

v) Academic activities and academic calendars are often disrupted. More and more strikes from different categories take place causing an alarming situation;

vi) Not many institutions can be compared with some of the well-known institutions in the world. Only IITs, IISc, Bangalore and some selected departments of central and state universities enjoy the reputation all over the world; and

vii) Some of the top students in engineering, technology and medicine go abroad resulting in brain drain.

Thus one can see that the unit cost of higher education is much higher and the social return rate is much lower.

Role of UGC

It is in this context that the role of the University Grants Commission (UGC) has to be seen. The UGC was established by an Act of Parliament in 1956 for promotion and coordination of higher education with a view to determining and maintaining the standards of teaching, examinations and research. The UGC Act was amended in 1972 with a view to regulate the unplanned proliferation of universities as well as colleges and again in September 1984 with the addition of an enabling provision to establish common facilities as well as service programmes and to deny grants to colleges which violate such provision and also to determine the scale of fees charged by the colleges.

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The UGC has played a significant role in quality improvement and promotion of excellence in teaching and research. A number of university departments have been identified under the programme of Special Assistance for strengthening teaching and research (CAS/DSA/DRS); some colleges have been selected for participation under the programme of COSIP, COSSIP, ULP, etc. In order to update the knowledge and professional competence of teachers, 48 Academic Staff Colleges have been set up (more than 25000 teachers have been benefited).

By involving a large number of academics from different universities, the UGC has developed model curricula and set up curriculum development centres in the university system. These curricula can bring about some qualitative changes in standards.

Attempts have been made to make large investment in research sector particularly in emerging areas like environment, ecology, energy etc. Bio-electronics and Computer Sciences have already started yielding results.

The Country-wide Classroom (CWCR) Programme was initiated by the UGC on 15th August, 1984. Motivation, innovation, creativity and analysis are the guiding elements of CWCR programme and it is also a unique experiment in higher education. The CWCR programme is not based on a particular syllabus. Instead, it seeks to provide new insights, bring new findings and take students to various places and laboratories they would rarely see. A good part of the audience has expressed appreciation of the CWCR programmes and has found them 'educative, interesting and informative'. Other comments are 'a valuable aid to academic pursuit', 'a great help in improving vocabulary and pronunciation'. Feedback also indicates that CWCR transmission has served the purpose of carrying educational information to all sections of the society.

The Commission started conducting a national level Test for the award of JRF (now for eligibility for appointment to the posts of lecturers in universities and colleges). These examinations have proved to be effective in maintaining national standards for postgraduate education in the university system.

After the UGC Act was amended in 1984, the Commission has set up as national facilities – Nuclear Science Centre at Jawaharlal Nehru University Campus, an Inter University Centre in Astronomy and Astrophysics at Pune, an Inter University Consortium at Indore (for utilising the facilities provided by the Department of Atomic Energy), Crystal Growth Centre at Anna University, Madras, Information Centre at IISc, Bangalore.

In spite of all the positive steps taken by the UGC, all is not well with our higher education system. The complexity coupled with pressure to expansion, mismatch of supply and demand and limited resources pose a serious challenge to the educational planners in India. There has been a steady erosion of quality of teaching and research which is due to unplanned growth of institutions without having adequate infrastructural facilities.

The University Grants Commission is concerned *inter alia* with improving the quality of research in humanities, science and social sciences. The Commission has also been entrusted with the responsibility of maintaining and improving standards. This has to be done in such a way that neither the freedom of individual researcher nor university autonomy is affected in any way.

In the past, the UGC appointed a number of committees to review researches carried out in different subjects in universities, to point out the successes and failures in this regard and make suitable recommendations. Consequently, a number of status and review reports were prepared in humanities and social sciences. In 1984, the University Grants Commission published a document 'UGC Policy and Programme for Improvement of Research in the Universities'. The NPE 1986 – Programme of Action presented to the Parliament has also a whole chapter on 'Research and Development'.

Status of Research

There seems to be a view that a good deal of research in humanities and social sciences is repetitive, and irrelevant. This applied to much of the work done for the M.Phil and Ph.D. degrees as well as to project research. This is illustrated with the example of two subjects. In History, at one time, almost everything done was dynastic history. Then came political and cultural history of different linguistic areas. This was replaced by socio-economic history. This was followed by research on temples. Thereafter came a number of dissertations on a number of small and big temples. We still have in vogue these types of history. We have done little in the field of history of ideas, on the interaction of society and ideology in different periods, and on the growth and modifications of institutions in successive ages. Other areas can be thought of like history of transport, production methods and history of science and technology. With the Indian Ocean, the Ganga or the Godavari as the foci, histories could be written. There can be histories of weaponry and methods of warfare. In other words, new ways of writing history have not been pioneered, as for example, Braudel and others have done in the West.

In Philosophy researches have not been significantly different or beyond the sort of things Haldar, Dasgupta and Radhakrishnan did in the beginning of this century. Haldar wrote on Hegelianism; today Russel Wittgenstein and Sartre are written upon. Dasgupta produced monographs on the Yoga System; today monographs on Neo-nyaya, Kashmir Saivism and Vaisheshik-Darsana are composed. Radhakrishnan did comparative studies of some ancient Indian philosophers and modern European philosophers; as a result there is much contemporary work comparing Bhartrihari and Wittgenstein, or Raghunatha and some modern western logicians. This is just to show how imitative work goes on. Development of ideas and their analyses, the ways in which systems are gradually built up over a number of centuries, criticism and evaluation of classical or contemporary philosophies using rational methods, these are done by very few.

One can say that research should result in new ways of looking at facts or finding inter-connections between them not known before; or it must result in new ways of doing things.

In the humanities as well as social sciences critical studies of beliefs, society and culture must be encouraged. To the extent possible in subjects like economics, sociology and psychology problems relating to development and nation building may be given priority. Similarly, in philosophy criticism of ideas, educational philosophy suited to Indian conditions, problems relating the values (both ethical and aesthetic) may be brought to the attention of researchers. While fundamental research and theorization are most important, applied research deserves emphasis. For instance, philosophers psychologists and sociologists may concern themselves with bioethics, medical ethics, ecology, national integration, problems of war and peace etc. The humanities and social sciences can surely formulate alternative models of development and economic plans, as well as strategies to combat communalism and terrorism, and provide fresh perspectives on adaptation of high technology without endangering what is best in our culture, on environmental education and on various civic issues.

Universities have to consider as to how to do away with outdated and unnecessarily restrictive rules and procedures, and find ways of recognising excellence and rewarding it.

Value Education & the Sai Experiment

After examining all these aspects the question that arises is as to what should be the goal of higher education? Should it only produce graduates, postgraduates, doctors, and experts in a specific field *or* should it also mould students to accept a set of values?

Higher Education, besides everything must impart ethical and moral values. When the values are eroded, there is confusion and chaos in the country. Many educationists have emphasized the need to inculcate value oriented education. Hence it is important that the universities and colleges consider it their business to attempt to inculcate values among the students. As much importance should be given to this as is being given to sports, theatre, debates etc.

In present day India where modern civilisation is creating more and more pollution, noise and conflict, it seems to be desirable to have in educational institutions facilities for practising silence and contemplation. If any university asks for financial assistance for such facilities, the Central Government or the UGC may try to provide.

As has been suggested by some eminent men like Radhakrishnan, the values implicit in the Constitution of India (in the portion relating to Fundamental Rights, Fundamental Duties and Directive Principles of State Policy) which ought to be unanimously acceptable to all Indian citizens must be propagated by Indian universities in their campuses and outside. Each university should find its own ways of bringing these to the attention of all its teachers, non-teachers and students and motivating them to adhere to them. This may be given high priority.

There are a set of common values to all religions which can be identified and inculcated – like truth, compassion, national integration, etc. The steps taken by Sri Sathya Sai Institute of Higher Learning, Prasanthinilayam deserve special mention in this context. This Institute (a deemed to be university) believes in promoting national integration in the best possible way. As such, it follows the policy of open admission and encourages students to join their studies from all parts of the country. The admission is made purely on the basis of merit irrespective of income, class, creed and religion.

Sri Sathya Sai Institute of Higher Learning accords very high priority to the programme of value education. The students have unique opportunity to live in a wholesome community life and pursue academic excellence, knowledge and wisdom combined with values like duty and devotion. They also learn meditation, yoga, games and service to the community alongwith other seekers of truth. The Institute has evolved a framework of five basic values of truth, righteous conduct, peace, love and non-violence. These are 'Education for Human Values' and the programme aims at harmonious development in an individual at cognitive, effective and conative levels. The assimilation of these values assures best possible nurturing of a human personality resulting in the resolution of inner and outer conflicts. This full vision of human potential and social needs provides prodigious foundations for further work in other parts of the country.

The Institute has many other good aspects like silent sitting, community prayer, occasional addresses by eminent persons, etc. While examination reforms has been rather slow in many universities, the salient feature of Sai Institute is its great success in semester system of studies with continuous and comprehensive internal evaluation. Laudable work has been done in the Institute for development of question banking. Adoption of grading system ensures higher degree of objectivity in the evaluation of performance of students. An important point in this regard is that students are tested not only for academic achievement but they are also tested in integral items such as yogasnas, games and sports, attendance at universal prayer, meditation, readings on unity of religion, attendance in classes and contribution in self reliance programmes. Statement of grades clearly indicates the grade secured in these items as well as in the academic areas. This enables the employers to select appropriate candidates for their jobs.

A course on Awareness Programme is an important feature of the education system of Sri Sathya Sai Institute of Higher Learning. This course is spread over two years. It is an excellent exposure to Indian culture as well as an opportunity for bringing about better understanding of cultural heritage of mankind. The first semester is devoted to the individual spiritual experiences. The second semester intends to acquaint the students with the cultural heritage of mankind. The third semester is devoted to the themes related with literature of the world. The fourth semester reviews the fundamental concepts in physical sciences and life sciences. An intensive study of this programme will provide many ideas for developing a suggested programme for college students as well as for students of higher secondary classes. Through these programmes the Institute provides to the students experience of the ideals of higher values which are essential in life. Another very significant yearly feature of the Institute is organisation of a summer course attended by the faculty members and the students, including those newly admitted, of all the three campuses. The course is held in Brindavan Campus (Whitefield, Bangalore) and it is addressed by eminent experts, guest speakers and selected teachers. Bhagavan Sai Baba, who is the Chancellor of the University also addresses the students and gives discourses.

Probable Remedies

1. Academic priorities have to be given for opening of new colleges and new universities. A survey may be undertaken for this purpose.
2. Entrance test at the graduate level and postgraduate level will help in selecting motivated students.
3. Semester system has to be reintroduced vigorously without any loopholes.
4. Modularisation and entrustment of the function of the evaluation to the teachers would be a useful step.
5. Students should have the freedom of choice of selecting modules rather than the whole packages based on self-help model.
6. Provision should be there for transfering of credits from one institution to another so that mobility of students can take place from one place to another.
7. Some of salient features followed in Sri Sathya Sai Institute of Higher Learning, Prasanthinilayam should be followed. These could be compulsory course or value based education, mentioning academic grades as well as grades secured in other activities which would enable the employer to select talented and sincere students, course on awareness, etc. What is observed now-a-days is that the university/college campuses have become more of political avenues rather than centres of academic excellence. There is a need to have a healthy relation between the teacher and the taught which could be established only by setting high models by the teacher before the students.
8. Delinking of jobs from degrees – competitive tests be conducted by employing agencies for selecting candidates in different fields.
9. Distance education be given high priority in order to reduce the burden of the universities.
10. There is an urgent need to have more autonomous colleges and autonomous department so that there is flexibility for the authorities to introduce new courses in the emerging areas.
11. What is extremely disheartening to note is that our examination system is based on memory. As a result, there is more frustration for students who cannot memorize all modules. Perhaps, there is a need to allow the students to use only textbooks in the examination halls and still test the knowledge of students. For this, the examination system needs an overall change. Continuous grading and evaluation of the students is a necessary step for improvement. Since the unit cost of higher education is much higher, the social return has to be commensurate with this cost.

Delhi University Library System

Central Reference Library
A Profile

J .B. Khanna*

Introduction

The University Library plays a significant role in supporting the mission of the University by enabling it to advance, transmit and sustain knowledge and understanding by providing and promoting access to recorded knowledge. The collection of books, journals, microfilms and other materials; the skilled assistance of library staff, the invaluable guidance of University Librarian and the particular services such as reference service, instruction in the use of material, provision of inter-library loan, photocopying facility, etc. all contribute towards rendering assistance to the faculty/academics, researchers, other scholars and students in the pursuit of knowledge and learning. The University Library is an integral part of the University.

Reference Section

Keeping in view the above cited objective, the University Library established Reference Section to cater to the demands of library patrons. Its importance and utility enhanced multifold with the formation of the Central Reference Library. To strengthen its services a rich reference collection has been gathered. It encompasses different aspects of universe of knowledge and the staff is imbued with dedication and a spirit of service. Service depends on the nature of query of the library clientele. The reference section coordinates all the other sections of the library. Modern reference service concentrates not only on providing readers with the required information but also assist them with personal guidance in a span of minimum loss of time and labour. Due to the multifold expansion of literature this service has become essential. Based on the query reference service is classified into following types :

(a) *Ready Reference Service:* Service is completed in shortest duration of time. It is more or less a fact finding service. Under this service following kinds of queries are usually entertained :

(1) Fact Finding type. (2) Material finding type. (3) Readers advisory type.

(b) *Long Range Reference Service*: The query takes more time to satisfy the reader. It demands more than one reference book to answer the question. For effective reference service, study of shelves, knowledge of catalogue, acquaintance with classification, awareness of unpublished material and contact with other Centres and their resources are the essential components. Provision of efficient reference service depends on (a) Availability of material, (b) Accessibility of source, and (c) Regional co-operation.

Research Floor Services Section

This important section of the Central Reference Library is located on the second floor and is exclusively meant for Ph.D and M.Phil research scholars. Due to paucity of space a limited number of seats with lockers are provided to them where they can keep the fifteen books issued to them against Research Floor Yellow Reader's Ticket. There are four big halls and one of them is fully air-conditioned to provide excellent studying facilities. Other halls have coolers to offer comfort and coolness to the researchers. Microfilm room is also on this floor, containing Microfilm Reader for the use of researchers. A cooler for providing fresh and cool water to researchers has also been installed. The canteen is housed on the third floor.

Close Section and Rare Document Collection Section

Theses, dissertations, out of print books, multivolume sets, wall maps, proceedings, reports and allied material is kept in this Section. Readers have no direct access to this section. They can give the details of the required books and the Reference Staff attends to them. Its material can only be consulted on the premises of the library. No photocopying, xeroxing, typing is permissible from unpublished theses and dissertations. Catalogue of theses and dissertations has been compiled according to surname of the author and department. It is placed in the Central Hall of the Library.

Placement of Collection: At the entrance to the library on the right side is Reference Desk surrounded with rectangular shaped wooden planks enclosure stacked with often asked reference sources. On the left side of the Reading Room at the rear corner is a mezzanine floor stacked with reference and bibliographical collection. On the left side of the ground floor is stacked the bibliography collection while on the right is the specialized collection of all subjects. On the first floor is Reference Collection pertaining to various facets of the universe of knowledge. A record of the combined collection of Bibliography and Reference is available with the Head, Reference Section for consultation only.

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Technical Services Section

This Section is bifurcated under two main Heads :

(A) Acquisition, and (B) Processing

(A) *Acquisition:* It is responsible for acquiring the books for the Central Reference Library. A Book Selection Committee under the Chairmanship of University Librarian recommends the books. The latter can also recommend at his discretion such publications as may be useful for the library.

(B) *Processing:* Books acquired for the library are processed in this section. Main work done in it is cataloguing and classification of the books as well as their completion and release from the section. In the case of cataloguing, keeping in view the approach of a reader, the entries are prepared for the author, editor, series, reviser, complier and translator. Instead of title entry there is a provision of preparing Subject Index Entry card. However title entry is prepared in the case of such documents that are fairly known by their title and not compilers, e.g. Encyclopaedia Brittanica, American Encyclopaedia, etc. Classified Catalogue Code edition 5th is used for preparing cards, with certain variations here and there. While preparing catalogue entries imprint and collation is also included for bibliorgraphical purposes. Principally catalogue comprises two parts namely 1) Alphabetical, and 2) Classified. Under alphabetical part one can find cards listed under author, collaborator, translator, compiler, series, etc. This part of the catalogue is arranged according to dictionary pattern (A-Z). In Classified part the entries are arranged according to Call No. of the books. The books are classified on the basis of Colon Classification 6th Rev. ed. For the newly coming up subjects of importance the Class no. is coined and for them Class Index Entries are prepared and filed in the alphabetical catalogue.

Periodical Section

This Section is located on the right side of the Reading Hall on the Ground Floor. Seating capacity is provided here for the patrons to pursue their research work in a calm and congenial atmosphere. Bound back volumes of periodicals pertaining to humanities and social sciences are neatly and systematically lined on the shelves. There is no restriction for browsers to browse among the periodical shelves as the library follows Open Access System. It also compiles on regular basis "Holding List of the Journals" received in section on subscription basis or as a gift. Periodicals recommended by the Heads of Departments are subscribed both through approved vendors of international standing and publishers directly. Received periodicals are registered first of all after sorting them according to the subject. Kardex System is used for registration purpose. After the completion of each volume, they are bound and stacked on the shelves. The current issues are displayed on the open display racks and pigeonholes. On the first floor, there is office of Periodical Section Head and her staff as well as a part of Binding Section.

Membership

All the Ph.D. and M.Phil Research Scholars conducting research in different disciplines of social sciences and humanities are eligible for enrolling as members of the Research Floor Services Section. Material of library can only be consulted within the premises of the library and can't be loaned out on any account. M.A. students can only consult reference documents for specified period. However faculty members, college teachers who have undertaken some research project or are engaged in writing a book or an article for seminar or symposia can avail of the facilities till the closing hours of the library.

Librarian's Office

Librarian's Office is located on the first floor of the Central Hall. Librarian's room is fully air conditioned while a cooler has been installed for para staff of the Librarian to provide sufficient comfort to them and to see that efficiency of the work is not affected.

Librarian's Office is broadly divided into following two sections:

1) Establishment 2) General.

Establishment Section

Establishment Section deals with transfer cases, promotion cases, notifications, etc.

General Section

General Section is responsible for maintaining annual leave record, despatch of mail and allied matters.

Photocopying Facility

Photostat machine is also installed here to provide requisite material to the scholars and the staff on request at the rate of 50 paise per exposure. Cyclostyling machine is also placed here to bring out required number of copies.

Staff

Central Reference Library and its services are backed by a sufficient number of professional and non professional staff whose composition can be enumerated as follows:

1. Deputy Librarians	3
2. Assistant Librarians	4
3. Professional Assistants	8
4. Semi-Professional Assistants	8
5. Library Clerks	2
6. Junior Assistants cum Typists	4
7. Peons	2
8. Senior Library Attendants	4
9. Junior Library Attendants	3

Store Section

It is housed on the left side of the second floor near the stairs and Research Scholars 'Notification Display Board'. It is responsible for keeping a record of the different items issued to the Heads of various sections by recording the items in the registers and by securely tagging the Requisition Proformas in the files.

Stock Verification & Weeding Out Unit

Wedding Out : This unit is on the right side of the Central Hall and undertakes the operation of segregating and weeding out the useless material occupying space required for other useful documents.

Stock Verification : This part of the unit is responsible to keep a track of the book collection by tallying and verifying the books collection with shelf list cards and afterwards stamping the book with Capital 'V' letter.

Accounts Section

This section is located on the right side of the Central Hall and their work concerns with the passing of booksellers' and publishers' Bills. They are also assigned the job of preparing salary bill, honorarium, overtime bills of the staff and pursuing them with the University for the cheques after passing them.

Braille Library

An important organ of the Central Reference Library is Braille Library, constituted to cater to the requirement of the visually handicapped students of various educational levels. This library was established a couple of years ago. To meet the needs of the blind students of different educational streams, the library appointed seven readers for reading the text of the prescribed course and all acquired a large number of braille books and periodicals. There is a transcriber also who transcribes the text for the use of students and lessons are also regularly recorded on the tapes to facilitate the reading process of such students. Individual and group coaching is given to them and instruction is imparted repeatedly to supplement their learning work and thus enthuse them fully with academic course content.

Braille Library functions from Monday to Friday at usual office hours; i.e. 9:00 A.M. to 5:30 P.M. daily. To improve the service the staff also visited other similar institutions to see their working and thus improving upon them by introducing new innovations. Tape Recorders are issued to students so that they can revise their lessons at home also.

Undergraduate Textbook Library

To cater to the textbooks demand of the undergraduate students of the affiliated colleges of the University of Delhi, located in various directions of the city at far flung places, four Undergraduate Textbook (UGTB) libraries have been set up in North, East, South and West zones.

The functions of these libraries are mainly service oriented. The desired books are issued to the students against Readers' Tickets for a stipulated period. Each zonal library is headed by a competent and experienced Assistant Librarian with a complement of para staff to assist him in the library work. He sends a list of required books after scrutinising the book requisitions of the students to the Technical Services Section Head who procures them and after getting them processed sends them with a duplicate list and a set of Alphabetical & Classified Cards as a record of his augmenting book collection and to be merged in the catalogue trays for the information of library clientele and that of staff, performing the duty of tracing the asked book from the shelf whenever requested by the library member. These libraries function from 9:00 A.M. to 6:30 P.M. except on Saturdays and Sundays and other gazetted holidays.

But as the university examinations approach their working hours are extended and hence they render service to the student community on normally non function days also. Due to the paucity of space in the hired buildings only limited seating space is available to the students to study and browse among the books. Number of copies of a particular textbook are acquired only after scanning through the requirement of the student. Besides textbooks to supplement their knowledge some dictionaries are also purchased to be used as a ready tool of reference both for the students and staff. One finds a congenial, calm and comfortable environment in these libraries whenever one goes there for a surprise visit for which the credit goes to the Head, his para staff & students.

Each zonal library has Rupees forty to fifty thousand as its yearly budget to obtain latest editions of the books pertaining to various subjects related to life sciences, social sciences and humanities.

Our Agricultural Strategy

Dr. Manmohan Singh, Union Finance Minister, delivered the Convocation Address at the nineteenth convocation of the Chaudhary Charan Singh Haryana Agricultural University, Hisar. He said, "Our agricultural strategy must become more knowledge intensive, more mindful of economizing resources and more scientific. This calls for a far greater contribution from our agricultural scientists and technologists. I would like them to get even closer than they have been to the field and the farmer, and to study agriculture as a system, as an entire process and to judge their effectiveness from the efficiency of the farm economy". Excerpts

By now it is fairly obvious that effective solutions to the problems of poverty, under-development and unemployment can be found only in the framework of a rapidly expanding economy. The Eighth Five Year Plan has as its target an average annual growth rate of 5.6 percent in GDP. Given the weight of agriculture in our economy, the performance of this sector will have a crucial bearing on the overall economic performance of the country. Indian agriculture has a vast untapped potential for growth. But its realisation will require some hard decisions.

The first point I wish to emphasise is that our future agricultural strategy and policies cannot be a simple replication of the past. More of the same will just not do. Indian agriculture has made significant progress since Independence. Yet the overall agricultural growth rate averaging about 2.6 percent per annum exceeded the population growth rate by a very small margin. Although the country is, by and large, self-sufficient in foodgrains, there has been only a modest improvement in per capita availability of foodgrains. It went up from about 395 gm. per day in 1951 to 475 gm in 1990. It is also significant that the overall agricultural growth rate of the country has not gone up despite the introduction of new technologies in the wake of the green revolution in the late 60s. By and large, the beneficial impact of the Green Revolution has been felt only in a small number of States and by only a limited number of crops. In many States, per capita production of foodgrains has shown no rising trend. Per capita availability of land continues to decline under the pressure of population growth. Land and water degradation has emerged as a major problem in several regions. There are also indications that even in areas of high response to Green Revolution technologies, productivity may have reached a plateau. For all these reasons, we will need to identify new sources of agricultural growth which will both counter the influence of negative factors now at work and also help to accelerate the rate of growth.

The foremost task in this regard is to reverse the disturbing trend of the 1980s which witnessed stagnation in investment in agriculture. This was largely due to a significant decline in public sector investment in agriculture. If more public sector resources have to be devoted to investment in agriculture, it will be necessary to raise the rate of public sector savings and also to reduce public sector investment in some non-agricultural sectors. Currently, the large revenue deficits both at the Centre and in the States constitute a serious obstacle in this regard. To gain some manoeuvrability, both the Centre and the States need to drastically reduce budgetary subsidies in support of current consumption as well as subsidies given to loss making public sector units. Public opinion has to be mobilized to appreciate that beyond a point these subsidies serve neither the cause of growth nor that of equity. Large scale subsidies now built into the pricing of electricity, public transport, irrigation and fertilizer prevent an efficient and economical use of these scarce resources, transfer resources from the public sector to relatively better off sections of population and adversely affect the public sector's ability to expand its investment in critical areas. Moreover, continuing to subsidise loss making public sector units even when they are patently unviable does no service to the cause of employment promotion. Indeed, the same resources if used to expand the supply of such critical inputs as electricity and irrigation could well make a much greater contribution to both employment and growth.

I am not suggesting that there should be no subsidy or that all subsidies should be abolished in one go. Indeed, I see a continuing role for a measure of food subsidy to protect the interests of more vulnerable sections of our people. But it has to be clearly understood that unless budgetary subsidies are reduced and public sector units yield higher rates of return, the ability of the Governments, both at the Centre and in the States, to invest more in agriculture will be severely constrained. Thus fiscal reform designed to eliminate revenue deficits at the Centre and in the States are an essential precondition of the Government being able to play a more purposeful role in the next stage of India's agricultural development.

Together with fiscal reforms, there has to be a reordering of priorities for public sector spending. The public sector will continue of have a major responsibility for investment in irrigation, control of land and water degradation, agricultural research and extension education, rural infrastructure consisting of rural roads, electricity as well as basic social services like education and health. More resources for these sectors can be found only if the public sector sheds some of its other responsibilities. Thus inviting private industry, both domestic and foreign, to take on some of the responsibilities hitherto shouldered by the public sector is not an anti growth or anti social justice measure. Indeed, by diverting a part of scarce public sector investible resources for deployment in socially more productive sectors, this measure would help to promote the cause of social justice. It is precisely for this reason that the new industrial policy announced in July, 1991 expanded the list of industries open to the private sector. If the policy succeeds in its objectives, more financial and administrative resources of the Government could be devoted to modernizing our agriculture and rural economy. In this context, I would urge all State Governments to have a careful reappraisal of their involvement in industrial activity. I have a strong feeling that excepting a few States like Gujarat, profit making public sector units are an exception rather than the rule. If there is no attempt to reduce the losses of public sector units, States will not be able to find more resources for investment in agriculture.

In addition to higher levels of public investment in agriculture, our economic policies ought to provide an adequate stimulus to increased private investment in agriculture. Unfortunately, the development strategy we have pursued until very recently involved promotion of import substitution based industrialisation behind exceedingly high levels of protective barriers. This high level of protection may have been justified in the initial stage. However, its persistence for over four decades gave rise to a high cost uncompetitive industrial structure which involves a significant measure of discrimination against agriculture and the rural economy. A progressive reduction in levels of protection – at a pace which will not hurt industry – will promote greater cost and quality consciousness in industry for the benefit of consumers. In the process, the terms of trade will move in favour of agriculture, thereby adding to the attractiveness of increased investments in agriculture. Hopefully, there will also be a reduction in the disparities of income and wealth between rural and urban areas. This is the basic justification for the new trade and industrial policies. Additionally, the elimination of quantitative import restrictions and reduced levels of industrial protection will create new opportunities for growth of agricultural exports in areas in which our country has a long term comparative advantage.

This brings me to the urgent need for revitalisation of the system of agricultural credit. Both in Punjab and Haryana private investment in mechanisation and exploitation of ground water resources was greatly facilitated by a well functioning system of cooperative credit. However, currently the state of the agricultural credit system in the country is far from satisfactory. Overdues have reached unacceptably high levels; there has been an increase in the number of willful defaulters. As a result, the agricultural credit system is unable to meet the growing credit needs of rural areas. Insistence on large scale subsidised credit has also affected the health of the agricultural credit system. Currently, the cooperative credit system has to pay over 13 percent interest rate to attract deposits. If it is asked to lend at 11.5 percent, there are clearly narrow limits to the expansion of credit flows. Moreover, in several States, Cooperatives suffer from serious management deficiencies and often these institutions are controlled by entrenched vested interests. As a result they are unable to mobilise local resources on a large scale. A systematic effort has to be made to revitalize the agricultural credit system.

The quality of public administration having direct responsibility for promoting agricultural and rural development also needs upradation. From all available evidences, the district and block level development administration is burdened with too many responsibilities and the level of available technical and administrative skills is not commensurate with the effective discharge of onerous responsibilities entrusted to it. It is only if the State Governments are willing to shed some less essential responsibilities that they will be able to spare sufficient resources for a first class agricultural development administration.

A few words about the crucial area of water management. This is one area where planning ought to be done on a holistic basis, based on the natural hydrological unit, the river basin. As it happens, most of the river basins extend over the territory of more than one State. Thus effective planning of water use requires strong inter-state cooperation. Yet in reality competitive politics oftern stands in the way of such cooperation. There has clearly been a lack of political will to find rational cooperative solutions to the problems of water management. The long run consequences could be disastrous. Haphazard and un-coordinated planning of water development might accentuate scarcity of water. It could also lead to intensification of inter-state conflicts. This is another issue which deserves urgent attention of the nation.

A close look at the irrigation scene in India points to the growing neglect of both maintenance and modernization of existing works. The promise and potential of the well known Command Area Development Programme launched in the 1970's has not been fully realised. There has also been a tendency to take on too many projects which cannot be adequately funded. There are a large number of unfinished irrigation projects.

Looking at the execution and management of irrigation projects and electricity projects, there is need for a fresh look at institutional mechanisms for financing these projects. The Central Government transfers large sums of money to States by way of block grants in support of their development. This mechanism has no built-in incentive to promote greater efficiency in project execution and management or the adoption of rational pricing policies. One way out would be to set up a National Bank for Irrigation and Power Development which would provide resources to States for the development of these sectors provided conditions of efficient project execution and sector management were met. There ought to be a national debate on this issue.

Issues relating to human resources development will need more systematic attention in the future agricultural development strategies. New science based technologies will be more readily understood and adopted if the agricultural labour force is educated. Hence the need for emphasis on early universalisation of elementary education. Similarly, there is urgent need to upgrade the quality of health care services in rural areas. The control of diseases such as malaria can make a major contribution to improvement of agricultural productivity. While it is legitimate to expect the State to contribute to the financing of social services, local resources should also be mobilised and community participation ought to be enlisted in the management of social services. Development cannot be sustained on the basis of hand outs. As far as possible, the emphasis ought to be on the provision of services rather than on subsidies and on empowering people to find effective solutions to their problems on the basis of maximum possible self-help.

Finally, a few words about the state of agricultural research and extension. On the whole, we have an impressive agricultural research system in which the Indian Council of Agricultural Research plays the role of an apex organisation for sponsoring, coordinating and promoting research, education, and extension work in agriculture and allied fields. Under the Council are 43 Central Institutes, four national bureaus, 23 national research centres, 9 project directorates, 70 All India Coordinated Research/Improvement Projects and 109 Krishi Vigyan Kendras. The Council also assists 26 State agricultural universities. While our agricultural research system has served our country well, there is need for a sharper prioritisation and a tighter system of monitoring, coordination and evaluation. Instead of spreading resources too thinly, more concentrated attention ought to be paid to increasing the productivity of crops in which our country has a long term comparative advantage. There is clearly a need for more intensive research and extension work in matters relating to the development of rain fed and dry land agriculture. Special attention has to be paid to technologies designed to raise the productivity of small and marginal farmers. Technologies which are environment friendly, assist in controlling degradation of land and water resources and are also energy saving ought to receive more systematic attention. Similary, our research agenda should also include development of cost effective technologies for meeting the growing energy needs of our rural economy. I understand that a review committee under the chairmanship of Shri G.V.K. Rao has gone into all these issues and its recommendations have been, by and large, accepted by the Government. It is essential that these recommendations are speedily implemented.

My general message therefore, is that our agricultural strategy must become more knowledge intensive, more mindful of economizing resources and more scientific. This calls for a far greater contribution from our agricultural scientists and technologists. I would like them to get even closer than they have been to the field and the farmer, and to study agriculture as a system, as an entire process and to judge their effectiveness from the efficiency of the farm economy. Your University has an outstanding record combining commitment to excellence as well as social relevance. You have achieved much since the establishment of the University in 1970. However, I venture to think that the best is yet to come. I wish you all success in your endeavour.

CAMPUS NEWS

Refresher Course in Commerce

The Academic Staff College of Himachal Pradesh University recently organised a 3-week Refresher Course in Commerce. In this programme 35 lecturers belonging to 14 universities of the country participated. The thrust area of the programme was Commerce Education in India: A Global Perspective.

Inaugurating the programme, Prof. K.C. Malhotra, the Vice-Chancellor of Himachal Pradesh University highlighted the nature and dimensions of developments in the global market and resultant emerging challenges for Commerce Education. Prof. Malhotra stated that no business could survive and grow without attending to the changing needs and expectations of global consumers. The most important areas which needed particular attention of the policy makers and commerce teachers were international business environment, rural marketing, insurance and small scale business, he said and added that the teachers had an additional responsibility of utilising their knowledge for the welfare and prosperity of the society.

The main topics included in the programme were: International Banking & Finance, Globalisation of Markets, Recent Economic Policy Changes, Project Appraisal, Trade & Development, Social Cost Benefit Analysis, Total Quality Management, Role of Multinationals, Global Influences on Indian Marketing, Liberalisation, Consumerism in India, MRTP & Consumer Protection, Legal Environment for Business, Global Effects on Tourism, Law & Business, Challenges of Marketing to Pacific Rim Countries, Global Banking, International Financing, Commerce Education in India, Financial Analysis, Investment Decisions, Research Methods, etc.

Special emphasis was laid on formal as well as informal interaction among the participants and professionals. Many topics were covered through case studies, business games, video cassettes, workshops, etc. Five Core Groups specialising in different areas, namely, Case Studies, Research Project, Review of Articles, Seminar and Discussion were developed. The benefit of specialisation was extended to the whole group in formal interactions.

During the programme an elaborate system of monitoring and evaluation was adopted. The feedback provided by the participants held the programme very effective and utilitarian. 25 resource persons belonging to different fields were associated.

In his valedictory address, Prof. Malhotra advised the teachers to utilise the knowledge and skills learnt during the programme in enriching their teaching and learning process. He also called upon them to adopt self-directed learning and continuous development of their cognitive and affective dimensions of personality.

Management of University Accounts

'Training programme is necessary at every level and for every category of employees to make them more functional, effective and efficient,' said Prof. N. Balakrishna Reddy, Vice-Chairman, A.P. State Council for Higher Education, while inaugurating the 10-day training programme on 'Management of University Accounts & Audit' organised recently by the Training Centre for Non-Teaching Staff of Universities in India at the Kakatiya University.

To make these programmes more effective and less expensive, Prof. Reddy suggested the need for having a full-time Co-ordinator to organise increased number of programmes in a year with standardised format on different aspects of university administration. The duration of the courses be increased from 10 to 15 days to make the training programme more meaningful and rewarding, he added.

In his presidential address Dr. K. Jayashankar, Vice-Chancellor of the Kakatiya University disclosed that the university was contemplating to have some sort of a permanent nucleus to organise such training programmes more frequently and a proposal to this effect had already been forwarded to the University Grants Commission (UGC). Once it was cleared by the UGC, the university would be able to expand the area of its activity, Dr. Jayashankar added.

Prof. A.Shankaraiah, Registrar of the University said that training programmes of this type would provide meaningful interaction among the participants from different universities and between the participants and the resource persons.

According to Dr. G.V. Bhavani Prasad, Coordinator of the Training Centre, 22 administrative personnel of the rank of Assistant Registrars and Superintendents, representing 13 universities and research organisations attended the course.

Mahalanobis Centenary Celebrations

"The concept of state has to become more federal in character. Regional groups and other local pressure groups have to be provided access to power in society, in order to overcome fissiparious tendencie", said Mr. K.R. Narayanan, Vice-President of India while inaugurating an international workshop to commemorate the birth centenary celebrations of the late Prof. A.P.C. Mahalanobis in New Delhi recently.

Mr. Narayanan added that though the state needed to reconcile the separatist and fissiparious tendencies, ranging from nationalism, sub-nationalism to tribalism, it could not do away with the unifying central authority. "In modern times one cannot dismantle the centre," he stressed. What was needed was to balance the paradox of decentralisation with centralisation and it was this that Prof. Mahalanobis had probed into, through his planning process, he said.

Mr. Narayanan was presented a book by Prof. Lars Rudebeck of Sweden, a participant at the workshop. Prof Rudebeck, who teaches political science at Uppsala University, has edited a book entitled *When democracy makes sense*. An anthology, it brings together 17 original contributions, first presented at an international social science conference organised in Uppsala in October 1989, by a working group for the study of development strategies (Akut), Uppsala University.

Mr. P.N. Haksar, the chairman of the Indian Statistical Institute (ISI), said it was high time the government gave importance to social sciences too. "The present century has seen the greatest human upheavals culminating into the disintegration of the Soviet Union and a virtual explosion of human consciousness. We need to understand all these. Mere technological advancement will not enable us to comprehend this. We need to understand these through an integrated and comprehensive social and physical sciences. At present the insides of the social sciences are too hollow to do that".

He said, what is needed is precisely the kind of endeavour which Prof. Mahalanobis had started way back in the 1930's, from a small place in Calcutta where he had founded the ISI.

Mr. Upendra Baxi, the Vice-Chancellor of Delhi University, said Prof. Mahalanobis, the prophet of planning, had inaugurated with Pandit Nehru by combining market with planning. This he said was relevant in the present day India, where market-friendly *perestroika* was going on. He said the so-called process of globalisation was threatening the local social movements. And it was in this context the workshop and its subject of discussion assumed added importance.

Prof. Mahalanobis (1893-1972), who was closely associated with Indian Planning process along with Pandit Jawaharlal Nehru, was "a physicist by training, a statistician by instinct and a planner by conviction". It was Prof. Mahalanobis who had founded the ISI in Calcutta in 1931.

The five-day international workshop on the theme of "social movements, state and democracy" was organised by the Indian Statistical Institute, Uppsala University of Sweden, and Delhi University. A large number of scholars from India, other parts of Asia, Africa, and Europe participated in this workshop.

Training in Personal Computer Technology

The IIT, Madras has set up a new cell at the Microprocessor Systems Lab. of the Department of Electrical Engineering, to develop the necessary infrastructure for imparting hands-on training as also handling the maintenance of Institute's PCs.

The cell is starting a one year apprentice training programme in Personal Computer Technology, for Graduate Engineers (Electronics/ Computer Science graduates). The training will consist of classes on small computer technology, peripheral equipment, manufacturing techniques, surface mount technology, trouble shooting and repairs, software tools, etc. The practical training will include the fault tracing repair, and upgrading PCs from the various departments of the Institute. This is expected to give a good hands-on experience to the trainees, who will necessarily have to handle a large variety of PCs. Capabilities in both hardware and software have been planned for the training programme.

The infrastructure, facilities, and expertise developed as above will also be used for conducting short-term courses for sponsored candidates from industry.

SV Varsity Introduces New Courses

The planning board of Sri Venkateswara University has approved the introduction of three courses. These are a three-year M.Tech course in atmospheric science, M.S. in systems management and M.S.in personnel and public management on a self-sustaining basis.

According to the Vice-Chancellor, Prof.P. Jayarama Reddy, the atmospheric science course would be started in collaboration with radar station at Mitta Gadanki, near Tirupati, and the Indian Space Research Organisation. The Department of Physics and Electronics in the university would be associated with the new course. Prof. U.R. Rao, ISRO chairman, would inaugurate the new course in November.

The courses in systems management and personnel and public management would be started in association with the Department of Business Management. Funds would be sought from the University Grants Commission to run the new courses.

Roles for College Teacher

Prof. K.L. Kamal, a well-known educationist and member of the Rajasthan Public Service Commission, recently inaugurated the Twenty-Third Orientation Programme of the Academic Staff College of Jai Narain Vyas University, Jodhpur. In his address Prof. Kamal specified three roles for a college teacher, namely, (i) Teacher as a creater of knowledge, (ii) Teacher as a communicator, and, (iii) Teacher as a reservoir of knowledge who is also a custodian of values. To realise these, a teacher must care and share with his students. He also suggested an agenda of humanist society, where the man should have (a) Freedom to choose his destination. State should act only as a coordinating agency to remove barriers; and (b) A social order with scientific temper and social justice. Culture borne out of scientific temper will radiate the personality.

He exhorted teachers to lay the foundations of such a humanist society. Revolution in science and technology had posed a great challenge before teachers, and if they failed to live up to the expectations of society, new education technology would make them reduntant. Why students would come to attend the classes when they will have access to first rate lectures in their homes through T.V. and other source? he asked. Teachers should realise this and try to set an example of an ideal person before students and society, both in terms of learning and behaviour.

The orientation programme was modular in approach. Its six modules were : Environment of the Indian Education, Philosophy of Education and the Education system, Educational Psychology and Pedagogy of teaching, skills for subject competency, Organisational Behaviour and Personality Development and Management of Education.

As many as 12 techniques, namely, Lecture Method, Case Study, Field Study, Behavioural Games, Group Discussion, Panel Discussion, Brainstorming, interactive Video-method, Micro-lab, in-basket exercise, Micro-teaching, Book Review were deployed in the programme.

Delivering the valedictory address, Professor V.K. Bhansali, Professor & Head of Electrical Engineering Department pointed out that we had not been able to make any significant structural change to the existing Macaulay model of system of education even after forty five years of Independence. We still look at education in parts – primary, secondary, higher secondary, etc. all under different administrators without any coordination of unified approach. Professor Bhansali emphasised that the primary stage of education was most important, but it was most neglected. The pressure of home work, on a child was so over-burdening that there was hardly any time left for joyful living or any urge left amongst teachers and parents towards the allround development of child's personality. Such teachers failed to inculcate the spirit of enquiry or curiosity, amongst students. "And Mind You", Dr. Bhansali reminded, "the spirit of enquiry is the foundation of all progress and development. Our education is only certificate oriented and job oriented. We do not encourage experimentation, originality and free research".

Fellowship for Scientists in MP

The Madhya Pradesh Government is reported to have introduced a fellowship scheme for young scientists in the State. Under the scheme, 10 fellowships would be awarded in different areas of science and technology every year. Priority in awarding fellowship would be given to those young scientists who are engaged in educational institutions and universities in remote areas.

Young scientists, below the age of 35, would be given a monthly fellowship of Rs. 2,500 in addition to their salary for a period of two to six months of their training. They would also be provided travelling allowance and a monthly amount of Rs. 500 as additional contingency amount.

The fellowship has been sponsored by the Department of Science and Technology and will be handled by the Madhya Pradesh Council of Science and Technology.

Kurukshetra Varsity Regional Centre

A regional centre of Kurukshetra University will be opened at Hisar and work on it will start soon, Dr. S. Arya, Vice-Chancellor of the university, revealed recently. He said the government had already allotted 200 acres of land on the Sirsa Road, Hisar, and Rs. 1.5 crore had also been sanctioned by the Chief Minister.

Dr. Arya said postgraduate classes in science, technology, environment and management, apart from job oriented and diploma courses, would be started at the centre.

Dr. Arya said Italy and India had entered into an agreement for an academic exchange at the postgraduate level in archaeology, forestry, social sciences and management.

All India Library Conference 1992

The XXXVIII-All India Library Conference, under the auspices of the Indian Library Association, will be held at Bhubaneswar on 21-24 November 1992. The theme of the Conference is Library and Information Science : In pursuit of Excellence. The topics proposed to be discussed under this theme would be :

(i) Library & Information Services: Impact of Information Technology;

(ii) New and innovative measures;

(iii) Automation and Computerisation :

- Database activities
- Creation and conversion of bibliographic records
- Bibliographic Record format
- Library software (s);

(iv) Information Retrival Systems :

- Access to national/international databases
- National Information System Networks;

(v) Developments in Information Industry :

- Data Communication Facilities
- CD-ROM Technology;

(vi) Human Resource Development.

Further details may he had from Dr. M. Mahapatra, Prof. & Head, Department of Library & Information Science, Utkal University, Bhubaneswar-751004.

SAARC Journalists Visit Osmania Varsity

Journalists from SAARC countries recently visited the Department of Communication & Journalism, Osmania University. In an interaction session they stressed the need for strengthening journalism and mass communication training facilities. The visiting journalists also pleaded for the institution of media fellowships for internship and exchange of scholars and journalists within the SAARC countries.

Mr. N.B. Naqvi, veteran columnist of *Dawn*, Pakistan felt that though there were five journalism training centres in the universities in Pakistan, most of them turned out government information personnel and others serving in advertising and PR industry.

Mr. Jahangir Hussain of *Bangladesh Times* pointed out that Dhaka University had a premier mass communication training centre which offered Honour's level courses both in Bangla and English languages.

In Sri Lanka, journalism education is of recent origin having started only a decade ago. Though Nepal has a course in mass communication at King Tribhuvan University, Maldives and Bhutan do not have formal training programmes in print media.

Prof. S. Bashiruddin, Head, Dept. of Communication & Journalism while welcoming the journalist-delegates from Bangladesh, Bhutan, Nepal, Maldives and Sri Lanka said that though there were nearly 50 journalism courses in India, hardly a dozen of them were able to offer comprehensive professional training and research.

The Vice-Chancellor of Osmania University, Prof. M. Malla Reddy, presented mementos to the 12 visiting journalists. The journalists evinced keen interest in the history and growth of Osmania University.

News from Agricultural Universities

Animal Physiologists Meet at HAU

Dr. P.N. Bhat, Deputy Director General (Animal Sciences), Indian Council of Agricultural Research, New Delhi, recently inaugurated the 8th Conference of the Society of Animal Physiologists of India (SAPI) and a national symposium on ‘Physiological Innovations in Buffalo Production" at Chaudhary Charan Singh Haryana Agricultural University (CCSHAU), Hisar. Dr. A.L. Chaudhry, Vice-Chancellor, CCSHAU, presided over the inaugural function. Addressing the participants, Dr. Chaudhry said that animal physiologists of the university had achieved a breakthough by inducing milk in infertile cows with which more than 5000 farmers had been benefited so far. Under this programme, hormone kit was provided to the farmers by the university's experts at ‘no loss no gain basis'. As the Indian buffaloes, especially the Murrah buffaloes of Haryana were the best in the world, it was the moral duty of the experts of animal sciences to maintain and further improve this breed of buffalo in accordance with the changing circumstances of the 21st century and beyond. He said that physiologists must strive to answer some questions like how soon would it be possible for a large number of buffaloes to attain high production potential pattern through Embryo Transfer Technology (EET).

In his inaugural address. Dr. P.N. Bhat, said that cross breeding had assumed special significance since mid-sixties, that is why it had been adopted as a national policy by the planners. Highlighting the efforts of the experts in bringing about improvements in livestock, he said ‘since independence we had been engaged in improving our domestic animals genetically through various technological inputs for making that economically viable'. With the production of cross-bred calves through the use of exotic semen, animal physiologists faced the challenge to save them from adverse climatic conditions, which were alien to them. Studies had been conducted on their physiological functions in extreme climates and necessary measures adopted to reduce mortality. Thus, they were able to achieve in the crossbreds lower age of maturity, early calving and increase in milk yield significantly as compared to their dams.

Dr. Bhat impressed upon the participants to take up studies on Climatic adaptation shelter management so that the crossbred animals and buffaloes became more productive and interacted with natural environment.

According to Dr. M.N. Razdan, Chairman, Organising Committee, more than 100 delegates from all over India participated in the three-day programme. During this period, the delegates reviewed the progress achieved in this field so far and finalised further strategies to be adopted for bringing about improvement in the livestock, especially the milching animals.

Foreign Journalists Visit HAU

A delegation of 25 correspondents from non-aligned countries recently visited Chaudhary Charan Singh Haryana Agricultural University, Hisar to study the developmental activities of the University. Led by Prof. M.R. Dua of the Indian Institute of Mass Communication, New Delhi, the foreign correspondents hailed from Kenya, Ghana, Indonesia, Uganda, Nepal, Guyana, Sierra Leone, Maldives, Vietnam, Kenya, Egypt and Malawi.

The visiting journalists were taken round the constituent colleges and research farm. At the research farm, they were shown the demonstration plots of different kharif crops, fruit and vegetable crops. They evinced keen interest in the post-harvest technology work undertaken by the Department of Horticulture for the processing of fruit crops. The experts at the constituent colleges explained to the members of the delegation the thrust areas of their activities.

In a meeting with the Vice Chancellor, Dr. A.L. Chaudhry and other senior experts of the university, the visiting journalists had detailed discussion on the success achieved by Haryana in the field of agriculture and animal husbandry.

News From UGC

Countrywide Classroom Programme

Between 2nd November to 7th November, 1992 the following schedule of telecast on higher education through INSAT-1D under the auspices of the University Grants Commission will be observed. The programme is presented in two sets of one hour duration each every day from 1.00 p.m. to 2.00 p.m. and 4.00 p.m. to 5.00 p.m. The programme is available on the TV Network thoughout the country.

Ist Transmission

1.00 p.m. to 2.00 p.m.

2.11.1992

"Light from Atoms"

"Chilli"

"Indian Agriculture –
A Scenario for the Future"

3.11.1992

"Using the Heat of
Combustion Apparatus (Glass)."

"Innovation: Diabetes –
The Quiet Killer."

"Educational Technology –
An Overview."

4.11.1992

"Structure of Matter –
How Do Things Break?"

"Fruit Bats of India –
An Introduction."

"Natural Gas in Industry."

5.11.1992

"Buried Treasure:
Out of the Rock."

"Nissim Ezekiel –
Poet Rascal Clown."

6.11.1992

"Conjecture and Proof
in Mathematics."

"Desert Wildlife –
Elegant Antelope Nilgai."

"Mental Illness –
Reaching the Unreached -II"

7.11.1992

"Raman, the Inspirer."

"Equestrian Sports –
Tent Pegging."

"The Art of Ikat."

IInd Transmission

4.00 p.m. to 5.00 p.m.

2.11.1992

"Intensive Fish Culture."

"Packaging Industry -II"

"External Borrowings – III:
Economic Restructuring"

3.11.1992

"Plastics and Polymers in
Daily Life - I"

"Diabetes – The Silent Killer"

"Management of
Classroom Teaching"

4.11.1992

"Herbarium -II"

"Keeping the Tracks Fit -I"

"Radiation and its Applications."

5.11.1992

"Functional Linguistics -II:
Functional Syntax."

"Pariyar and Self Respect
Movement."

"SEA ME WE."

6.11.1992

"Vedic Mathematics -IX:
Cubes and Cube Roots
by Anurupya Sutra."

"Foundations of Freedom."

"S.O.S. Waste."

7.11.1992

"The Language of Cinema"

"Design - II"

"Week Ahead."

News from Abroad

Designing the Library of the Future

The detailed design phase of a highly sophisticated computer system for the Library of France, due to open in 1995, is nearing completion. Design alone has cost £6 million and the whole system – which will have to handle between 10 and 15 million bibliographical entries covering 400 kilometers of shelves – has a £24 million budget.

But the main challenge has been not so much the scale of the project as the aim of finding new ways to make the system user-friendly. A feature is automatic linkage of book reservation to a place. A researcher will be able to reserve document from home, through the telecommunications network Minitel, or from a main local library. The user will then be allocated a place in one of the reading rooms at the time the books are ordered. "This means that, for example, academics travel from a provincial university and can get down to work immediately they arrive," Colin Boettcher, technical co-ordinator for the computerisation project, explained.

Another linkage built into the system ties a catalogue query to an instruction to the appropriate stacks keeper who then puts the book on an automatic transport system. The query is automatically identified as coming from a particular reading room, speeding up the delivery time to what planners believe will be 15 minutes.

For the computer-friendly researcher, there will be special computer-aided reading stations instead of the traditional desk top.

Located in individual "cells" off the reading room mezzanines, the stations will allow users to create their own corpus of research material. The researcher can call up about a dozen documents and then carry out such operations as marking up, highlighting or cross-referencing on screen.

By the beginning of 1996, several dozen work stations should be available, drawing on an initial data base of 100,000 digitised documents. The number of stations will then be expanded gradually to 200.

Other ideas for making the system user-friendly have yet to be proved feasible. One such project would provide a natural language interface for querying the catalogue. This would enable user to locate an entry even if they do not know the standard key words.

Throughout the design phase, user groups have been meeting two days a week to put forward ideas and test software. The groups, made up of academics, administrators, librarians and computer scientists, have a day of preparatory meetings which alternate with a day of encounters with the software company.

The computer system is being built in French but will have two other language capabilities, probably for English and German.

The catalogue will be national, uniting all main university and town library catalogues in France. In three years' time, users will be able to query it from home to locate documents all over the country.

Nushu – the Women's Language

A Chinese linguist in Beijing is reviving an ancient language, Nushu, which is written and spoken only by women. The word itself means female handwriting.

Chen Qiguang, from the Central Minorities Institute in Beijing, is working with colleagues on a 900-page anthology of 400 texts in Nushu, which he says is a unique written language.

Only a few dozen women can still read the language and of these only one, an 83-year-old peasant woman, is still able to write it. "Once, tens of thousands could do so," Chen Qiguang says.

For more than a millenium the women of the Wuling region, in the heart of southern China, have told the stories of their lives in little embroidered booklets. Chen carefully opens an examples on a low table, which dates from the 1940s. The fragile pages seem to have poorly withstood the damp.

Nushu characters are written vertically from the top to the bottom of the page and are very elongated, a little like sewing stitches. Perhaps, suggested Chen, it is because women began to write it by embroidering it.

The Nushu texts saved from extinction by Chinese linguists are for the most part correspondence. Some letters refer to episodes in the Opium War (mid -19th century) and the pressing of men into the Imperial army, the armies of the local war lords or the Kuomintang in the 1930s and the 1940s. Others are translations of traditional Chinese stories such as *The Story by the Water.*

Some linguists give credence to a local legend, according to which a young woman who was chosen to become a concubine of an emperor of the Song Dynasty (960-1279) invented Nushu herself.

She was imprisoned in the imperial harem from which it was forbidden to communicate with her friends in Hunan, so is said to have devised this language to get past the censorship by embroidering Chinese characters on seemingly harmless pieces of cloth. The characters were perfectly standard but were to be read not from their semantic meaning but phonetically, based on the Hunan dialect.

Written Chinese, in which signs represent concepts, can be understood by any literate Chinese-speaker, unlike spoken Chinese which has numerous variations. The logic of Nushu could thus be that the Egyptian hieroglyphics which, despite their pictographic appearance, actually represent sounds.

For other linguists, Nushu is, like Chinese, a derivative of Jaiguwen, a language of divination invented under the Shang Dynasty (16th-11th centuries BC).

Chen Qiguang rejects all these theories. For him Nushu, a derivative of written Chinese, began to be used "about a thousand years ago"by both men a women in the Wuling region. Among the hundreds of ancient manuscripts he has analysed, at least three were written in a masculine hand.

The women were traditonally confined to household tasks and considered to be "of an inferior essence", so the progress of literacy only affected men. They eventually came to despise and forget phonetic Nushu in favour of semantic Chinese which is indispensable for trade and for passing the imperial examinations thus opening the door to public office.

Indira Gandhi National Open University

Schedule of Telecast for the period 1 November to 30 Nevember
6.30 a.m. to 7.00 a.m.

Date/Day	Academic Prog.	Title of the Course
2.11.92 Monday	Bachelor's Degree Programme	Ateet ka Punarsrijan
4.11.92 Wednesday	Computers in Office Management	Phased Modernisation of an Office I
6.11.92 Friday	Management	Facility Layout
9.11.92 Monday	Bachelor's Degree Programme	District Administration
11.11.92 Wednesday	Bachelor in Library & Info. Science	Colon Classification III
13.11.92 Friday	Management	Effective Selling
16.11.92 Monday	Bachelor's Degree Programme	Zila Prashasan
18.11.92 Wednesday	Computers in Office Management	1. Phased Modernisation of an Office II 2. Open Channel
20.11.92 Friday	Management	Personal Computers for Managers
23.11.92 Monday	Bachelor's Degree Programme	Raahon ke Anveshi – Agyeya
25.11.92 Wednesday	Certificate in Food and Nutrition	Old Age Nutrition
27.11.92 Friday	Management	Managerial Challenges in the 90's-I
30.11.92 Monday	Bachelor's Degree Programme	Structure of Atom – A Historical Perspective

RESEARCH IN PROGRESS

A list of Research Scholars registered for Doctoral Degrees in Indian Universities

PHYSICAL SCIENCES

Mathematics

1. Gupta, Sanjeev Kumar. **A study of submanifolds.** BHU. Dr (Miss) Kalpana, Department of Mathematics, Banaras Hindu University, Varanasi.

2. Kaul, Vijay. **A study on three-dimensional free-convection in a fluid overlying a porous layer.** BHU. Dr A K Singh, Department of Mathematics, Banaras Hindu University, Varanasi.

3. Kothuri, Lakshmi Sai Prasad. **Differential geometry of vector bundles.** BHU. Dr (Miss) Kalpana, Department of Mathematics, Banaras Hindu University, Varanasi.

4. Mishra, Shashi Kant. **Stability properties of integro- differential system: Linear and non-linear system.** BHU. Dr R N Mukherjee, Department of Applied Mathematics, Institute of Technology, Banaras Hindu University, Varanasi.

5. Pandey, Shashi Bhushan. **Theory of summability.** BHU. Prof L M Tripathi, Department of Mathematics, Banaras Hindu University, Varanasi.

6. Pathania, Desh Bir Singh. **Onset of instability in some fluid dynamical systems.** HP. Dr J R Gupta, Department of Mathematics, Himachal Pradesh University, Shimla.

7. Rai, Ashok Kumar. **Numerical methods in free boundary problems.** BHU. Dr K N Rai, Department of Applied Mathematics, Banaras Hindu University, Varanasi.

8. Romeo, P G. **Cross connections of concordant semi-groups.** Kerala.

9. Sharma, Savita. **Some characterization theorems in hydro dynamic and hydromagnetic stability.** HP. Dr J R Gupta, Department of Mathematics, Himachal Pradesh University, Shimla.

10. Singh, Arvind. **A study on tangent and cotangent bundles.** BHU. Dr S D Singh, Department of Mathematics, Banaras Hindu University, Varanasi.

11. Singh, Bhanu Pratap. **Distribution theory.** BHU. Dr O P Singh, Department of Applied Mathematics, Institute of Technology, Banaras Hindu University, Varanasi.

12. Singh, Deepa. **Study on certain submanifolds of delta-manifolds.** BHU. Dr S D Singh, Department of Mathematics, Banaras Hindu University, Varanasi.

13. Singh, Sanjiv Kumar. **Collineations in Riemannian spaces.** BHU. Dr R Qurashi, Department of Mathematics, Banaras Hindu University, Varanasi.

14. Singh, Vinod Kumar. **A study on tangent and cotangent bundles.** BHU. Dr R N Singh, Department of Mathematics, Banaras Hindu University, Varanasi.

Statistics

1. Jaiswal, Vimal Kumar. **On some models migration and population growth.** BHU. Dr K N S Yadav, Department of Statistics, Banaras Hindu University, Varanasi.

2. Mandal, Syamsunder. **Statistical inferences for reliability models.** BHU. Dr S Tripathi, Department of Statistics, Banaras Hindu University, Varanasi.

3. Pathak, Akhilish Kumar. **Some demography models and their applications.** BHU. Dr K K Singh, Department of Statistics, Banaras Hindu University, Varanasi.

4. Singh, Devendra Pratap. **Some elimination problems in sample surveys.** BHU. Dr V K Singh, Department of Statistics, Banaras Hindu University, Varanasi.

5. Singh, Dhruwa Pal. **Demographic models.** BHU. Prof R C Yadav, Department of Statistics, Banaras Hindu University, Varanasi.

6. Singh, Lalit Vijay. **Some problems of statistical inference under conditional specification.** BHU. Dr R D Singh, Department of Statistics, Banaras Hindu University, Varanasi.

7. Singh, Shailesh Kumar. **Inferences for life time distribution.** BHU. Dr Umesh Singh, Department of Statistics, Banaras Hindu University, Varanasi.

8. Singh, Shri Prakash. **Some models relating to migration and development.** BHU. Dr K N S Yadav, Department of Statistics, Banaras Hindu University, Varanasi.

9. Sinha, Rajat Kumar. **Some demography models and their application.** BHU. Dr K N S Yadav, Department of Statistics, Banaras Hindu University, Varanasi.

10. Yadav, Jitendra Nath. **Mathematical models in demography.** BHU. Prof R C Yadav, Department of Statistics, Banaras Hindu University, Varanasi.

11. Yadav, Vijay Kant. **Some aspects of out migration and its effects on fertility.** BHU. Dr Usha Srivastava, Department of Statistics, Banaras Hindu University, Varanasi.

Physics

1. Acharya, Subrata. **Laser spectroscopy of atoms and molecules.** BHU. Prof D K Rai, Department of Physics, Banaras Hindu University, Varanasi.

2. Bhatnagar, Atul Kumar. **Computer communication systems studies and analysis.** H S Gour. Dr H V Varma.

3. Chattopadhyay, Sasim. **Study of structure and spectra of molecules.** BHU. Dr P C Mishra, Department of Physics, Banaras Hindu University, Varanasi.

4. Chaturvedi, Pankaj. **Mossbauer study of natural minerals.** H S Gour. Dr H V Varma.

5. Ganguly, Sonali. **Electromagnetic propagation in confined media with different boundary conditions.** BHU. Dr S P Ojha, Department of Applied Physics, Institute of Technology, Banaras Hindu University, Varanasi.

6. Gupta, Satish Kumar. **Investigations of synthesis and characterisations of super conducting and quassi crystalline materials.** BHU. Prof O N Srivastava and Dr A K Singh, Department of Physics, Banaras Hindu University, Varanasi.

7. Jain, Sunil Kumar. **Study on electrostatic and electromagnetic ion-cyclotron instabilities.** H S Gour. Dr M S Tiwari.

8. Kamalakaran, Radha. **Study of high temperature super conducting cuperate and fullerance materials.** BHU. Dr A K Singh and Prof O N Srivastava, Department of Physics, Banaras Hindu University, Varanasi.

9. Khan, Amir Ayub. **Interfacial properties in liquid crystals.** BHU. Dr Shri Singh, Department of Physics, Banaras Hindu University, Varanasi.

10. Khare, Pratishtha. **Electrode effect on changing and discharging behaviour of doped and undoped polymers and their blends and composites.** H S Gour.

11. Khare, Versha. **Exotio materials including high temperature super conducting materials-cuprates and fullerance and malt spun solids.** BHU. Prof O N Srivastava, Department of Physics, Banaras Hindu University, Varanasi and Dr R S Tiwari, Department of Physics, Banaras Hindu University, Varanasi.

12. Litoriya, Hemant. **Study on wave propagation in ionized medium.** H S Gour. Dr M S Tiwari.

13. Mahesh Narayan. **Transport phenomena in semi conductors and dielectrics.** BHU. Dr K C Sood, Department of Physics, Banaras Hindu University, Varanasi.

14. Mishra, Praveen. **Study in molecular structure and spectra.** BHU. Dr P C Mishra, Department of Physics, Banaras Hindu University, Varanasi.

15. Mishra, Vandana. **Multilayered and other waveguides and structures in light wave technology and communication.** BHU. Dr S P Ojha, Department of Applied Physics, Banaras Hindu University, Varanasi.

16. Om Prakash. **Whistler studies at low latitudes.** BHU. Dr R P Singh, Department of Physics, Banaras Hindu University, Varanasi.

17. Patra, Binoy Krishna. **Few body dynamics.** BHU. Prof S N Mukherjee, Department of Physics, Banaras Hindu University, Varanasi.

18. Phool Chand. **Investigations on the structural and electronic behaviour of quassi crystals.** BHU. Dr R S Tiwariand Prof O N Srivastava, Department of Physics, Banaras Hindu University, Varanasi.

19. Prasad, Ram Lakhan. **Laser spectroscopy of molecules.** BHU. Prof S N Thakur, Department of Physics, Banaras Hindu University, Varanasi.

20. Preeta Sharan. **Slab waveguides in light wave technology.** BHU. Dr S P Ojha and Dr B Prasad, Department of Applied Physics, Institute of Technology, Banaras Hindu University, Varanasi.

21. Ranjan, Manish. **Investigations of hydrogen energy and super conducting materials.** BHU. Prof O N Srivastava and Dr RSTiwari, Department of Physics, Banaras Hindu University, Varanasi.

22. Ranjan, Manoj. **Electrostatic and electromagnetic wave instability in space plasma.** BHU. Dr S P Mishra, Department of Applied Physics, Institute of Technology, Banaras Hindu University, Varanasi.

23. Sant Kumar. **Electromagnetic wave propagation in wave guides of unusual geometry filled with chiral media under different boundary conditions.** BHU. Prof O N Singh and Mr P Khastigir, Department of Applied Physics, Institute of Technology, Banaras Hindu University, Varanasi.

24. Shukla, Kirti. **Studies in the spectra and structure of molecules of biological interest.** BHU. Prof D K Rai, Department of Physics, Banaras Hindu University, Varanasi.

25. Singh, Arvind Kumar. **Transport properties in solid electrolyte: A theoretical study.** BHU. Dr Shri Singh, Department of Physics, Banaras Hindu University, Varanasi.

26. Singh, Binod Kumar. **Investigations of exotio materials hydrogen storage and quasi crystalline materials.** BHU. Dr A K Singh, Faculty of Science, Banaras Hindu University, Varanasi.

27. Singh, Dhananjay. **Theory of liquid crystals.** BHU. Dr Shri Singh, Department of Physics, Banaras Hindu University, Varanasi.

28. Singh, Venktesh. **Nuclear collisions at high energy.** Prof S K Tuli, Department of Physics, Banaras Hindu University, Varanasi.

29. Sinha, Sangeeta. **Optical waveguides of different geometrical shapes.** BHU. Dr S P Ojha, Department of Applied Physics, Banaras Hindu University, Varanasi.

30. Sree Valsan, E . **A study of the nonconventional energy resources based on climate of Kerala.** Dr (Miss) A Mani, Indian Institute of Tropical Meteorology, Bangalore.

31. Srivastava, Arun Kumar. **Lattice vibrations in super lattices.** BHU. Dr S S Kushwaha, Department of Physics, Banaras Hindu University, Varanasi.

Chemistry

1. Bhargava, Kalpana. **Synthesis of small peptides.** Dr R Balaji Rao, Department of Chemistry, Banaras Hindu University, Varanasi.

2. Gupta, Mahendra Prasad. **Synthesis and characterization of organobiometallic compounds.** BHU. Dr V P Singh, Department of Medicinal Chemistry, Banaras Hindu University, Varanasi.

3. Jain, Luna. **Chemical Investigation of medicinal plants.** BHU. Dr V B Pandey, Department of Medicinal Plants, Banaras Hindu University, Varanasi.

4. Khan, Tabrez Ahmad. **Studies in heterocyclic chemistry.** BHU. Dr R L Gupta, Department of Chemistry, Banaras Hindu University, Varanasi.

5. Lal, Manjari. **Physico-chemical investigations of w/o microemulsions.** Delhi. Prof Amarnath Maitra, Department of Chemistry, University of Delhi, Delhi.

6. Negi, Neena. **Synthetic studies in nitrogenous compounds.** Delhi. Dr M Kidwai, Department of Chemistry, University of Delhi, Delhi.

7. Pandey, Vaishali Kumari. **Organo sulphur chemistry.** BHU. Dr P K Srivastava, Department of Chemistry, Banaras Hindu University, Varanasi.

8. Passey, Sarita. **Synthesis of bioactive compounds derived from substituted fatty acids and sesquiterpenes of natural origin.** Delhi. Dr G B V Subramanian, Department of Chemistry, University of Delhi, Delhi.

9. Powar, Tukaram Narayan. **Studies in schiff base metal complexes.** Shivaji. Dr P G More, Shivraj College, Gadhinglaj District, Kolhapur.

10. Radha Rani. **Proton-transfer in aprotic solvent.** BHU. Dr S K Sengupta, Department of Chemistry, Banaras Hindu University, Varanasi.

11. Rai, Bishw Prakash. **Electro-organic synthesis.** BHU. Dr R A Mishra, Department of Chemistry, Banaras Hindu University, Varanasi.

12. Rai, Pushpa. **Studies in the electrochemical synthesis of organic compounds.** BHU. Dr R A Mishra, Department of Chemistry, Banaras Hindu University, Varanasi.

13. Ramesh Kumar, A V. **Laser photolysis and physico-chemical studies of complexes.** BHU. Dr S D Khatri, Department of Chemistry, Banaras Hindu University, Varanasi.

14. Ray, Julie Acharya. **Study of natural products with emphasis to synthesis of some selected compounds.** Delhi. Prof N R Parthasarthy, Department of Chemistry, University of Delhi, Delhi.

15. Sengupta, Diyali. **Synthesis of a structurally defined peptides.** Dr R Balaji Rao, Department of Chemistry, Banaras Hindu University, Varanasi.

16. Singh, Ashish Kumar. **Chemical investigation of solanaceous plants.** BHU. Dr M Sahai, Department of Medicinal Chemistry, Banaras Hindu University, Varanasi.

17. Singh, Meenakshi. **Electro analytical studies on polymeric and allied system.** BHU. Dr B B Prasad, Department of Chemistry, Banaras Hindu University, Varanasi.

18. Singh, Nagendra. **Transition metal complexes of nitrogen and sulphur ligands.** BHU. Dr N K Singh, Department of Chemistry, Banaras Hindu University, Varanasi.

19. Singh, Rishi Kumar. **Preparation and characterization of heterobiometallic complexes of some ambidanted ligands containing nitrogen and sulphur as donor atoms.** BHU. Dr M Singh, Department of Chemistry, Banaras Hindu University, Varanasi.

20. Singh, Sandhya. **Trace analysis employing electro-chemical methods.** BHU. Dr B B Prasad, Department of Chemistry, Banaras Hindu University, Varanasi.

21. Singh, Sanjiwan. **Chemistry of natural products.** BHU. Dr M Sahai, Department of Medicinal Chemistry, Banaras Hindu University, Varanasi.

22. Singh, Sushil Kumar. **Corrosion of metals.** BHU. Dr M M Singh, Department of Applied Chemistry, Institute of Technology, Banaras Hindu University, Varanasi.

23. Singh, Ved Prakash. **Biochemical characterization of ayurvedic metallic preparation.** BHU. Dr Y B Tripathi, Departent of Medicinal Chemistry, Banaras Hindu University, Varanasi.

24. Sinha, Rajiv Kumar. **Synthesis and characterization of some transition metal complexes.** BHU. Dr B Singh, Department of Chemistry, Banaras Hindu University, Varanasi.

25. Srivastava, Devesh. **Metal complexes and their analytical applications.** BHU. Dr A K Ghosh, Department of Chemistry, Banaras Hindu University, Varanasi.

26. Sreekumar, C S. **Reversibility of the reaction and sorption properties of the regenerated synthetic ion-exchangers: Separation and determination of ions.** Kerala. Dr T S Anirudhan, Lecturer, Department of Chemistry, University of Kerala, Thiruvananthapuram.

27. Tripathi, Manju. **Phytochemical investigation of medicinal plants.** BHU. Dr V B Pandey, Department of Chemistry, Banaras Hindu University, Varanasi.

Earth Sciences

1. Ataabadi, Abdul Hamid Amiri. **Geology of base metal mineralization in Bafo Area, Central Iran.** Delhi. Dr Mihir Deb, Department of Geology, University of Delhi, Delhi.

2. Banerjee, Ashim Kumar. **Late quaternary sedimentation patterns in the Thar Desert, Rajasthan.** Delhi. Prof S K Tandon, Department of Geology, University of Delhi, Delhi.

3. Bose, Vikram. **Sedimentation pattern of late quaternary sequences of the Thar Desert.** Delhi. Prof S K Tandon, Department of Geology, University of Delhi, Delhi.

4. Gandhi, Uday Chandra. **Genesis of proterozoic phosphorite deposit of Lalitpur, Lalitpur District, U P.** BHU. Dr H P Sengupta, Department of Geology, Banaras Hindu University, Varanasi.

5. Juneja, Raman. **Seismic tomography and inversion of data.** BHU. Prof Avadh Ram, Department of Geophysics, Banaras Hindu University, Varanasi.

6. Kulbhushan, Arvind. **Studies on geomagnetic field and related aspects.** BHU. Dr A S K Murthy, Department of Geophysics, Banaras Hindu University, Varanasi.

7. Mathur, Ashish. **Development of interpretational techniques in electrical and electromagnetic methods.** BHU. Prof T Lal, Department of Geophysics, Banaras Hindu University, Varanasi.

8. Mazumdar, Aninda. **Trace element geochemistry of rocks from proterozoic-Cambrian boundary sections.** Delhi. Dr D M Banerjee, Department of Geology, University of Delhi, Delhi.

9. Nayar, Shivinder K. **Hydrogeology.** Delhi. Dr V N Bajpai, Department of Geology, University of Delhi, Delhi.

10. Pandey, Mahendra Kumar. **Atmospheric ozone weather relationship.** BHU Dr J Chattopadhyay, Department of Geophysics, Banaras Hindu University, Varanasi.

11. Paul, Subrata. **Remote sensing application in hydrogeology.** Delhi. Dr V N Bajpai, Department of Geology, University of Delhi, Delhi.

12. Prasad, Kashi Nath. **Seismicity studies of Himalayas and adjoining areas.** BHU. Dr V P Singh, Department of Geophysics, Banaras Hindu University, Varanasi.

13. Prasad, Sangeeta. **Studies on electrical and electromagnetic methods of prospecting.** BHU. Prof T Lal, Department of Geophysics, Banaras Hindu University, Varanasi.

14. Purkayastha, Sarbari. **Vailrita group Mandi and Kullu Districts.** Delhi. Dr P K Verma, Department of Geology, University of Delhi, Delhi.

15. Raj, Shammi. **Micro meteorology.** BHU. Dr D V Vishwanadhan, Department of Geophysics, Banaras Hindu University, Varanasi.

16. Ray, Anindya Sundar. **Organic geochemistry of black shaks carbonates and phosphorites at proterozoic-cambrian boundary.** Delhi. Dr D M Banerjee, Department of Geology, University of Delhi, Delhi.

17. Sharma, Arvind Kumar. **Structure and tectonics.** Delhi. Prof P S Saklani, Department of Geology, University of Delhi, Delhi.

18. Singh, Sunil Kumar. **Some studies on natural source electromagnetic methods.** BHU. Prof T Lal, Department of Geophysics, Banaras Hindu University, Varanasi and Dr K M Srivastava, Department of Geophysics, Banaras Hindu University, Varanasi.

19. Tiwari, Harendra Kumar. **Geophysical data processing.** BHU. Dr R D S Kushwaha, Department of Geophysics, Banaras Hindu University, Varanasi.

20. Tiwari, Ram Pravesh. **Seismic sources and its applications.** BHU. Prof Avadh Ram, Department of Geophysics, Banaras Hindu University, Varanasi.

21. Tiwari, Virendra Mani. **Analysis of potential field anomalies and field studies.** BHU. Dr A S K Murthy, Department of Geophysics, Banaras Hindu University, Varanasi and Dr K M Srivastava, Department of Geophysics, Banaras Hindu University, Varanasi.

22. Tiwary, Anju. **Massive sulfide deposits in Southern Rajasthan.** Delhi. Dr Mihir Deb, Department of Geology, University of Delhi, Delhi.

Engineering & Technology

1. Afsari, Morteza. **Analysis and design of distribution net work.** BHU. Prof G K Rao, Department of Electrical Engineering, Banaras Hindu University, Varanasi.

2. Chaturvedi, Sanjay Kumar. **Excess thermodynamic properties of binary mixtures.** BHU. Dr N S Garg, Department of Chemical Engineering, Banaras Hindu University, Varanasi.

3. Chaurasia, Ram Ashish. **Soil reinforcement systems using geotextiles anchors and gestextile anchor combination.** BHU. Dr K K Jain, Department of Civil Engineering, Banaras Hindu University, Varanasi.

4. Ghosh, Sanjay Kumar. **RF propagating structures for microwave/mm-wave tubes.** BHU. Dr P K Jain and Dr B N Basu, Department of Electronics, Institute of Technology, Banaras Hindu University, Varanasi.

5. Girish Chandra. **Neural network models on logic testing.** BHU. Prof Raghunath, Department of Electronics Engineering, Institute of Technology, Banaras Hindu University, Varanasi.

6. Karimi, Dariush. **Slow fatigue crack growth and threshold performance materials.** BHU. Dr D N Lal, Department of Metallurgical Engineering, Banaras Hindu University, Varanasi.

7. Mahadevan, M. **Digital communication system design for fading channels.** Kerala. Dr Sakuntala S Pillai, Principal Scientific Officer, State Committee on Science Technology and Environment, General Hospital Road, Thiruvananthapuram.

8. Mohan, Anand. **Analysis and synthesis of digital waveform generators with special reference to instrumentations.** BHU. Dr Raghunath, Department of Electronics Engineering, Banaras Hindu University, Varanasi.

9. Musbah Junah Ibrahim Aqel. **Expert system development.** BHU. Dr S K Kak, Department of Electronics Engineering, Banaras Hindu University, Varanasi.

10. Nigam, Vinod Kumar. **Biosynthesis of 7-ACA using free and immobilized cells.** BHU. Dr S Kundu, Department of Biochemical Engineering, Institute of Technology, Banaras Hindu University, Varanasi.

11. Radhamony, K G. **Studies on a multiple access mobile communicating system.** Kerala. Dr M Harisankar, Principal Scientific Officerand Dr Sakuntala S Pillai, Principal Scientific Officer, State Committee on Science, Technology and Environment, General Hospital Road, Thiruvananthapuram.

12. Sanjay Kumar. **Fault transients on MT-HVDC system and performance study of D C circuit breaker.** BHU. Dr J N Sinha, Department of Electrical Engineering, Institute of Technology, Banaras Hindu University, Varanasi.

13. Saroch, Anuradha. **CAD studies on some of the microwave subassemblies.** BHU. Dr (Miss) A Chatterjee and Dr D S Venkateswarlu, Department of Electronics Engineering, Banaras Hindu University, Varanasi.

14. Singh, Anil Kumar. **Corrosion of metallic materials.** BHU. Prof T K G Namboodhiri, Department of Metallurgical Engineering, Institute of Technology, Banaras Hindu University, Varanasi.

15. Singh, Bipin Bihari. **Studies on spray forming of wear characteristics of AL-SI-X (XmCu, Mg, Ni) alloys.** BHU. Prof S N Ojhaand Dr J P Pathak, Department of Metallurgical Engineering, Banaras Hindu University, Varanasi.

16. Singh, Krishna Kumar. **Opto-electronic devices.** BHU. Dr R B Paul, Department of Electonics Engineering, Institute of Technology, Banaras Hindu University, Varanasi.

17. Srivastava, Alka. **Microsensors.** BHU. Dr S K Srivastava, Department of Electronics, Institute of Technology, Banaras Hindu University, Varanasi.

18. Tiwari, Birendra. **Electrochemical mass transfer in wastewater Engineering.** BHU. Dr A K Verma, Department of Chemical Engineering, Banaras Hindu University, Varanasi.

THESES OF THE MONTH

A list of doctoral degrees accepted by Indian Univesities

PHYSICAL SCIENCES

Mathematics

1.Arul Raj, S Maria. Permanental mates and star matrices.Bharathidasan, 1992. Dr C S Karuppan Chetty, Asstt Prof, Department of Mathematics, Regional Engineering College, Trichy.

2.Baloria, M S. Growth and factorization of meromorphic functions. Jammu, 1992. Dr A P Singh, Reader, Department of Mathematics, University of Jammu, Jammu.

3.Banerjee, Banani. A theoretical study of hydromagnetic flow in a rotating system. ISM, 1992. Dr G S Seth, Asstt Prof, Department of Applied Mathematics, Indian School of Mines, Dhanbad.

4.Basavanagouda, B. A study in the theory of graphs. Gulbarga, 1992. Prof V R Kulli, Chairman, Deparment of Mathematics, Gulbarga University, Gulbarga.

5.Chakravarty, Snehashish. Numerical solution of vibration of plates. Roorkee, 1992.

6.Geetha Vani, Potluri. Magnetoconvection in rotating fluids. Bangalore, 1992. Dr N Rudraiah, Vice-Chancellor, Gulbarga University, Gulbarga.

7.Ghosh,Debaprasad. Compactifications, real-compactifications and subsets of C(X). Burdwan, 1992. Dr Kshitish Ch Chatterjee, Reader, Department of Mathematics, University of Burdwan, Burdwan.

8.Gupta, Urvashi. Linear stability problems in hydromagnetics. HP,1992.

9.Gupta, Vandana. A study on the degree of approximation of a function by its - Fourier expansions. Vikram, 1992. Dr Ashutosh Pathak, Lecturer, Department of Mathematics, Vikram University, Ujjain.

10.Jha, Vijay. The Stickelberger ideal in the spirit of Kummer with application to the first case of Fermat's last theorem. Panjab, 1992.

11.Nagendra Kumar. Wave propagation and instabilities in certain plasma configurations. Roorkee, 1992.

12.Rajagopal, Rajalakshmi. Some studies in meromorphic functions. Madras, 1992.

13.Vijayabharathi, Lingala. A study of a class water-wave scattering problems. IISc, 1992.

Statistics

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MPAU Convocation

Shri Sharad Pawar, Union Defence Minister, who delivered the convocation address, lighting the lamp to mark the opening of the seventeenth convocation of the Mahatma Phule Agricultural University, Rahuri. On his right are Shri Rohidasji Patil, Pro-Chancellor & Maharashtra Agriculture Minister and Dr. S. K. Dorge, Vice-Chancellor of the University.

ANNOUNCEMENT

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Editor :

SUTINDER SINGH

1992

Aurobindo's Pointers on Education

A.K.Ghosh*

At a time when we think in terms of futurology, can one envisage a better ideal than that of the life divine as formulated by Sri Aurobindo and worked to perfection by the divine Mother?

Sri Aurobindo was a scholar, a teacher, an editor, a social thinker, a seeker of truth, a revolutionary, a yogi, a poet, a philosopher, a patriot and a prophet – all combined into one.

As a scholar Sri Aurobindo is probably matchless in India. His scholarly works like *Essays on the Gita, Synthesis of Yoga, The Life Divine,* etc. not only majestically display his masterful thoughts but bring out most effectively what sort of scholar he was. As a teacher in pre-independence India, his name will go down in Indian history as one of the shining symbols of inspiration for generations to come. His teaching was not confined only to educating the younger but also to elevating these ideas in all directions - love for freedom, for education of the soul, for selfless service, for spiritual regeneration etc.

To come to the word 'education' it is often mistakenly taken to mean academic proficiency only. But that is only one facet of the whole. Man perceives, receives, conceives, interprets and absorbs into his self a whole range of sights, impressions, ideas, experiences and feelings – a process necessarily a part of education. Often, education is associated with the training and development of the mind alone. The physic also needs to be trained; the spirit, too, has to be led to the path of development. Unless these are correlated, a complete and comprehensive education cannot be claimed.

The pattern current in India today leaves much to be desired. A mind that has memory as its strong point will find it ridiculously easy to corner the honours. Whereas a mind that perhaps nicely blends the imaginative, the analytical and the creative, goes without those all important grades because it lacks the supreme power – memory. This kind of disappointment at a time when encouraging impetus is needed, with all the repurcussions that follow will slowly and surely kill the fineness of the mind, until its identity is completely lost. Again the student is often forced into a curriculum that goes against his essential grain, simply because he needs to possess a degree. We see the masses surging out of colleges and universities with a useless bit of paper proclaiming them to be graduates and then – full stop. A majority of the student population cannot afford further education, and without it, the subject has no comprehensivity and remains just meaningless. Result – idleness that prompts evil in all and what it produces in India today – poor in every sense of the word. Vocational training that could have probably worked wonders with a receptive mind, and also saved a good bit of unpleasant behaviour and its consequences happens to suffer a nameless indignity – why the lord knows – while a degree certificate that is empty and breeds a hornet's nest is lauded. The educated one who is supposed to build up his character and discover and develop his natural abilities, and also is expected to function as an important social unit is standing at the brink of an abyss facing total and irrevocable annihilation of all that is precious and priceless in himself.

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A radical change then, is required with the accelerated rate of change in the world today. A careful consideration has to be given in formulating this change, if the educated one is to mean anything at all in times to come. The mind is drawn to ponder on Sri Aurobindo's Pointers on Education propounded and expounded at the International Centre on Education at Pondicherry. His and the Mother's theory on education hold primarily important, Man - his individuality and commonness. He is unique and yet representative. The education imparted should enable him to explore, find and make grow all that is individual, while helping him to establish his "right relation" with all around him. This is important, for the Indian Soul, collective and individual, always has as its intrinsic part, Divinity. Aurobindo holds that education should ultimately aid the recognition and growth of spirituality towards perfection and then the element of Divinity will rise and fuse with the Ultimate.

Integral Education

Knowledge of matter, that is, practical education must fuse with the Spirit, and the resultant integral education is the only true form of education. This, in brief, is Aurobindo's contention. This integral education is the training of five principal activities in Man – the physical, the vital, the mental, the psychic and the spiritual. Begin with the toddler, when physical discipline is what he needs and will respond to. The training of the body will continue throughout his life, regulating the functions of the body infusing confidence through fitness while enabling keener perceptions and alert mental activity. Stage two – the adolescent needs an outlet, the growing mind is aware, probes, feels and finds. The responses of the child are gently but firmly moulded by letting the child find for himself the path to truth. His drawbacks are treated as curable, unmanifest virtue brought to the fore – in all, his character is built up. The aesthetic sense is guided, the beautiful and the harmonious creating a positive psychological impact on the mind. The different arts are taught, enabling the child to choose and find for himself his capacities and limitations and grow in conditions that promote perfection of that art to discern the Divine through beauty, and the consciousness will lift his being closer to the Supreme one.

To educate the mind means not to stuft it with factual knowledge and calling upon memory's services to render available this crammed stuff to answer dull unimaginative questions to receive a perfectly meaningless certificate. Education becomes a force when treated thus. The Mother lists five phases essential in a true education of the mind. They are.:

1. Development of the power of concentration, the capacity of attention.
2. Development of the capacities of expansion, wideness, complexity and richness.
3. Organisation of ideas around a central idea or a higher ideal or a supremely luminous idea that will serve as a guide in life.
4. Thought control, rejection of undesirable thoughts so that one may in the end, think only what one wants and when one wants.
5. Development of mental silence, perfect claim and a more and more total receptivity to inspirations coming from the higher regions of the being.

This sort of training enables the application acquired knowledge in the best possible way. And this knowledge should be a blend of the scientific and of the arts, but nothing is forced upon the mind, it follows a natural inclination and chooses for study that subject that the mind has an aptitude for.

Academic education is over, and now comes a form of education that the layman is unfamiliar with. Its concerns are often given merely a cursory consideration by most people. This system of education holds, that now the mind is conditioned and ready to search and find truth. The body is fit and able to aid this search. Man is ready for the psychic education. It is at this stage that a greater consciousness opens up in him. This penetrates through the external as well as the subconscious and makes man arrive at this problem – the true motive of life, discover it, and with the discovery, makes complete "the consecration of the individual to his external principle". The discovery is not essentially mystic. "Psychic" denotes that which belongs to the Soul, and Sri Aurobindo's Yoga has expounded the spiritual evolution in which the consciousness of the Divine is inevitable. This consciousness and the LIVING of the experience, is psychic education.

Spiritual education is the path to the summit. Through Yogic discipline spiritual education trains and enables the mind to transform the boundaries set by time, space, all creation itself. This transcending of matter will enable man to transform it - raise it from its baser levels towards the Supramental, while that Supramental consciousness will, in response, descend to elevate this matter, and what the united result may be, staggers, and leaves human understanding breathless. We have reached the peak. Divinisation of matter, the crux of Sri Aurobindo's Yogic philosophy is the supreme goal towards which the integral education has aimed and if followed with scrupulous care and undaunted will, will achieve. It is an education for a life time.

The layman questions : how does this form of education help the common man who is struggling in this world to find a place for himself, who is working for

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National Law School of India University and its Library

C.U. Navalgund*

Introduction

Many people wonder why we need to set up yet another "Law School" when the country has already a surfeit of law colleges. According to latest figures there are over 355 institutions imparting the so-called legal education to over two hundred thousand students. Few universities also give correspondence course in law. It remains the cheapest in university education and it is generally taken as the "easiest" course available for every type of student aspiring for a professional degree. It is one department of higher education where the private sector occupies a dominant role (most law colleges being part-time teaching centres managed by private managements) and the practising lawyers form the overwhelming majority of teachers. According to some educational administrators, law colleges are often the sources for campus agitations and student indiscipline. Senior Advocates and Judges blame the law schools for the poor quality of legal practitioners and the consequent lowering of standards in administration of justice. The state of professional education in law altogether presents a dismal picture about which conscientious professionals have started questioning the very relevance of classroom instruction as it obtains today. Of course, there are exceptions and some law colleges do perform an excellent job despite severe constraints of resources and poor institutional support; but they are too few to make any difference in the deplorable level to which legal education has fallen with the uncontrolled expansion of so-called professional colleges.

Advocates Act and Professional Standards

At the beginning when the Advocates Act was adopted in 1961 giving an all India Bar and authorising the Bar Councils to maintain standards of professional legal education in consultation with the universities, there used to be a compulsory period of apprenticeship followed by Bar examinations before a person was licensed to practise. This was intended to ensure some familiarity with court practices, professional ethics and minimum professional competence on the part of the new entrant to the Bar. Very soon this requirement was abandoned making a university degree in law the sole pre-requisite for admission to the Bar. Realizing the stakes involved, the Bar Council tried to restructure the law curriculum including "practical training" as part of the three-year LL.B course. Partly because of the lack of expertise and resources and partly as a result of disinterestedness of the students, most law colleges either dispensed with this part of the training or made it such a casual affair as to be of little significance educationally. The practice of unlimited admissions, of ill-prepared lectures, of liberalized attendance procedures, of mass copying at examinations and of indiscriminate licensing by some State Bar Councils soon led to a situation in which Law courses failed to attract the bright students not retained them. By the time the Bar Council of India realized the gravity of the situation, another one hundred thousand or more law graduates stormed into the profession diluting standards further.

The next move of the Bar Council to arrest the deteriorating standards was to conceive legal education in two distinct strands – professional and liberal. The rules of the Bar Council were to apply only for the professional stream. Universities had the freedom to decide whatever form of legal education they wanted to impart in the liberal sense. In respect of professional education, the Bar Council, in consultation with the universities, decided to bring, *inter-alia*, the following changes :

(1) Professional legal education was to be of five years' duration after the 10 + 2 school education. This, it was hoped, would bring more motivated students to the law school and help them complete their law education in a shorter period saving one full year;

(2) The study of law in the context of present-day requirements, it was felt, necessitated an integrated view of law-in-society which would be possible only by a selective study of social science subjects and of English language. These subjects (Economics, Political Science, Sociology, History and English) were to form part of the law curriculum;

(3) Practical training was to be taken as an essential component of legal education and this would be imparted through required clinical programmes within the curriculum.

(4) Professional training in law, it was argued, demanded more time and teachers; as such professional law colleges should function for a minimum of five hours a day and they must have a core group of qualified, full-time teachers in law.

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It appeared that these changes brought out in 1982 would soon usher in a new dynamism and give the desired direction in professional legal education. However, the vested interests and ill-informed politicians made a hue and cry against the new pattern of legal education and burried it deep without giving it a fair trial. It was condemned as elitist, unit-poor and violative of social justice principles! Others saw in it a design to get law colleges closed down and prevent entry of common people into the profession. Democracy seemed to have succeeded in deciding the future of professional education and the Bar Councils compromised, giving the option to individual colleges to decide whether they wanted to run 3-year or 5-year courses, in part-time or full-time colleges, with the requisite facilities or without. Legal education turned back to square one!

A National Law School for Excellence

The Bar Council, of course, did not altogether give up its statutory responsibilities for maintenance of legal education standards. It revived an early proposal to start one or more model law schools directly under its sponsorship to pioneer reforms in legal education. With the assistance of the Karnataka Government and the Bar Council of India Trust, a national institution was soon set up with the status of a University committed to study law in multi-disciplinary perspectives and in a developmental context. A high-powered General Council involving the leaders of the Bar and the Bench besides members of the Bar Council, was constituted with the Chief Justice of India as the Visitor of the School. A team of dedicated and experienced teachers was assembled from all over the country and entrusted with the responsibility of designing the courses of study and programmes of research. The local government gave land, temporary accommodation, a Statute clothing it with the authority of a University and a foundation grant to get the project started. Thus was born the National Law School of India University (NLSIU) at Bangalore on August 29, 1987.

The NLSIU is not yet another law college. It is unique in several respects. Firstly, it is the first and only law university in the country. Secondly, it is the only professional school sponsored by the organised legal profession and managed largely by the Bench and the Bar with the Chief Justice of India as the Visitor. Thirdly, it has an unique and innovative curriculum integrating the study of law with the social and natural sciences, supported by specially developed teaching materials. Fourthly, it employs a variety of teaching methods of which clinical education forms a major strategy. Fifthly, it has an examination system which measures learning much more satisfactorily and provides opportunities for improved teaching and better student performance. Sixthly, it is the only law school which admits students purely on merit on the basis of an all India admission test held conveniently in different cities and regions. Seventhly, NLSIU has a placement system and an academic exchange programme through which students are enabled to gain experiences in different situations even while they pursue their studies. National Law School pursues higher standards of excellence by cooperative efforts in an atmosphere of complete freedom and mutual respect. It aims to cultivate qualities of head and heart, sensitivity to human suffering and passion for justice and fair play. Above all, it attempts to mould the personality developments of its students in the best traditions of public service.

Academic Activities

During my experience of more than three and a half years (since its inception) in NLSIU I have observed the following salient features of its academic activities :

1. Only university which works for more than 235 working days in a year;
2. Cooperative teaching – which means more than 2-3 teachers go to the classroom at a time for teaching. Of course, this is also a first of its kind in India and is not practised by any other law imparting college/university in India;
3. Teaching is mainly through discussion method rather than the conventional one man show (lecture) method. In this method students are required to participate actively in the discussion and in-turn calls upon both students and teachers to keep abreast of the on-going (day-to-day) developments in the country as well as abroad in relation to Government policy-making, legislations, courts' decisions etc., so as to discuss critically their sociological/political/economic and legal impacts on the society;
4. The university is following the trimester system. In each trimester four subjects are taught;
5. The examination system in National Law School is perhaps totally different system compared to other institutions/universities in India.

   There are two examinations in each trimester. One is the mid- trimester exam after $1\frac{1}{2}$ months of the beginning of each trimester and there is the final exam at the end of the trimester. After each exam alongwith the question-papers model answers are also prepared by the teachers and kept in the Library. As soon as students complete their exams they can browse the model answers and compare them with what they have written in the exam; immediately they will come to know (i) whether they are right/wrong; (ii) How many marks they can get (in law, coming to a conclusion or one correct answer is very difficult; hence, the marks will be based on the logic they have followed in arriving at their conclusions/decisions/one answer etc.); and (iii) There can be no room for any bias.

6. Students will get gradewise results (seven point system) after their final exams of each trimester on the basis of the performance in these two exams plus project assignments, attendance and viva-voce exams.
7. In each trimester each student is given project assignments in each subject (four subjects) on a particular subject/topic consisting of mostly multidisciplinary approach. This assignment carries substantial marks also. Students are expected to submit these assignments through searching/collecting the data/information from the documents/field work etc., and organise, think, analyse and put it in a proper frame. This is a tremendous job especially for the undergraduate students when it is compared to any other undergraduate course in India.

Besides the above mentioned activities, there are other important activities like Moot Court Competition – internal as well as external (NLSIU has already won in a number of national/international Moot Court competitions), Debate Competitions, Quiz Competitions, etc. These activities are all carried out by the students.

Faculty members are also involved in a number of other academic activities, besides the regular teaching, like writing articles/books as the university is publishing two regular periodicals from its first year itself, attending conferences/seminars, conducting various courses, programmes, seminars, workshops etc., including being company executives and, more important, conducting refresher courses for the law teachers in the country every year.

Another important feature is a number of activities being conducted, under its legal services clinic like legal training to the social activists, legal literacy programmes for the undergraduate girls/boys students (other than the law students) in Bangalore colleges. A free legal aid centre is also being setup for the rural poor.

The above mentioned activities of NLSIU give an idea of how much pressure is there on both teachers and students to achieve excellence in these activities. This also gives an idea of the amount of information needed by them regularly to keep abreast of the latest developments in their respective area of subjects/study. The Library has a major role to play in carrying out these activities in NLSIU. With our past experience we can easily say that a student must spend not less than 3-4 hours a day in the Library and on an average there are 70-80 queries everyday with only about 275 students inclusive of LL.B (Hons), LL.M. and M.Phil courses. By the end of five years there will be 350-400 students and the quantum of queries, services etc. in the Library will also go up.

Library

Keeping in view of the unique features and objectives as well as activities of NLSIU, the Library has been established and started working from June, 1988 under the guidance of dynamic and ambitious director, Dr. N.R. Madhava Menon. He expects this library to become a well advanced legal information dissemination centre for the law students, teachers, researchers, practicing lawyers, judges etc., in the country with well equipped modern technology, (i.e. computerised storage/retrieval of information) staff and reading materials and also that this library should become a model to other law libraries in the country as the present state of the law libraries in India is far from satisfactory when compared to other college/institution/university libraries.

Though this library is attached to an educational institution (which is supposed to be an academic library) by virtue of its specialised subject collection, readers and services rendered in the library make it as a special library.

Acquisition

At present we have about 15,000 volumes including bound volumes of journals, reference books such as encyclopaedias, dictionaries, government publications, reports etc., covering Law and allied subjects.

In the first year, collection development was a bit slow but since last two years it is increasing day-by-day. At present the collection development is need based i.e., acquiring the necessary documents which are required for the forthcoming trimester and ours is a active collection. Before purchasing any document much care is being taken. There is a library advisory committee consisting of senior faculty members and the librarian. The committee screens the list of books required and also selects the books which are received on approval basis and after the approval of the Director, books are procured for the library.

Bound Volumes of Journals/Reports

The library has approximately 4,000 back volumes of important journals/reports, Indian as well as foreign which forms basic source of information to the legal professionals for their legal research.

Current Periodicals

There are 100 Indian/foreign current journals/reports being subscribed to and about 50 journals are being received gratis from various organisations in India as well as abroad. The coverage of the subjects are mainly law and allied subjects. It is hoped that in the current year the number of journals/subscriptions will be doubled including those received on exchange basis as NLSIU is publishing two Journals of its own i.e., 1. *March of the Law;* and 2. *National Law School Journal.*

Technical Processing

The documents are processed immediately after receiving them in the library and kept ready for the users as early as possible. Separate registers are maintained for accessioning of books and bound volumes.

The Dewey Decimal classification 19th Ed. for classification and AACR-II for cataloguing system has been followed. Exhaustive subject headings are prepared for the use of the readers for their different subjects approaches.

Circulation

The Library has adopted open access system. It is kept open from 9.00 A.M. to 6.00 P.M. Monday through Saturday and remains closed on Sundays and public holidays. In the near future our plan is to keep the library open from 9.00 A.M. to 9.00 P.M.

For charging and discharging of books, a combination of the Newark and Browne systems is followed. On an average 200 books are issued per day and there are only 275 readers. Due to the paucity of books and other reading materials, the documents are issued only for overnight reading purpose.

Staff and the Library Administration

At present the library is managed by experienced and highly qualified modest staff consisting of one Librarian (consultant), one Assistant Librarian, two Library Assistants, one typist and two peons. This library is setting an example to other law libraries, rather Law colleges in the country to start their library with the qualified library staff right from the beginning for the effective management of the library system.

The Faculty Board lays down broad policies of the Library and the Library Advisory Committee monitors them. The acquisition of materials in the Library is in accordance with the above policy. The Librarian is overall responsible for smooth functioning of regular library administration and management.

At present the Library offers the below mentioned services to its readers (other than its regular acquisition and technical processing of documents etc :

1. Personalised Reference/Information service;
2. Referral service;
3. Reprographic service;
4. Inter-Library loan service;
5. Paper clipping service;
6. Articles index service;
7. Compilation of bibliographies on request.

The Library is equipped with the below mentioned equipments for the effective learning/teaching purpose of its academic community :

1. Photocopier;
2. Audio Visual equipments;
3. Computer;
4. Overhead projector.

Future Plan

The future plan of the library will be centered around the computer. So that the library will become a truly modern library. With the help of the computer, the following are our immediate plans :

1. To introduce current awareness service, SDI etc.;
2. Compilation of subject bibliographies regularly on request as well as in anticipation;
3. Establishment of a local library network effectively which in due course would develop as a regional and national level network;
4. Actively participate in the UGC sponsored INFLIBNET programme.

Conclusion

In a short span of three years NLSIU is acclaimed both in India as well as abroad as a centre of excellence in legal education. Although first batch of NLSIU products is yet to come out in 1993, the way in which the students are learning, it seems that the Bar Council of India has succeeded in establishing a model institute for the legal profession in the country and in maintaining high professional standards and producing true social engineers for the society.

The university is again an example for achieving excellence through collective efforts of the dedicated faculty and enthusiastic students and of course active support of the administrative staff under the dynamic, ambitious and able leadership of Dr. N.R. Madhava Menon within the available limited resources. I hope in years to come there would be lots of changes in all spheres of legal education, practicing etc., in the country and NLSIU will continuously strive for it.

Linkages Between the Universities and Industry

R. Mehrotra*

Consistent with the overall spirit of the New Education Policy, the major tasks of the universities and other seats of higher learning in the years to come are to do everything to transfer vigour and action to academia, to remove roadblocks and obstacles to interaction, to let teachers and students and researchers loose on the important and significant themes and issues of our time, to give them the freedom and responsibility to innovate in teaching and research, to bring about the much needed wedlock between these universities and seats of higher learning and the industry in order to create an exuberant society capable of facing the challenging problems of our times, be they academic, technical or societal. As Professor Yash Pal, the former Chairman of University Grants Commission exhorted the Vice-Chancellors of Indian Universities in his demi-official letter on the Seventh Five Year Plan, "The universities must be brought centre-stage. Anything new which affects peoples' lives can never be imprisoned within one discipline. Disciplines exist as a concession to the limitations of human mind. While there is a growing need for specialisation in different disciplines, to absorb, assimilate and add to the growing body of discipline-based knowledge, simultaneously we must range across disciplines to be able to touch reality in the raw 'and to grapple with vexatious and burning problems of the day which in form and content transcend disciplines'. It is only across the boundaries of disciplines that cross fertilisation of ideas is most potent."

It is this perspective alone that should guide and strengthen the need and justification for establishing and strengthening the linkages between disciplines on the one hand and, simultaneously on the other, those between the universities and the industry most broadly construed. This requires that there must first be a happy wedlock between pure science and applied research so that the marriage between the universities and the industry is successfully consummated. Both aspects are "compossible" to use a word coined by Leibnitz.

Pure Science & Applied Research

Pure science has enjoyed almost everywhere much greater prestige than applied research, and this is more accentuated in countries where science is comparatively a new thing. Unless special care is taken, pure research will tend to dominate and even drive out applied work. It seems that left to itself, there is nearly always a tendency for research, even in project-oriented laboratories, to become 'purer and purer' unless there are strong countervailing forces. These institutions should place special emphasis on applied and industrial research.

It is often held that universities should perform almost exclusively pure (basic) research leaving applied research and development in all branches of science to other institutions. This belief or ideology is based on an image of university role and of research which prevailed among a minority of university teachers in the scientific world some decades ago. The universities in the industrialised countries make a substantial contribution to applied research and some of them, in varying degrees, even to development research. Today, with the advance of science and technology the distinction between pure and applied research, between a research scientist and a research engineer, has become artificial, and in fields like Electronics it has almost disappeared. The same individual may be working at one time in pure research and at another time on an applied problem. The difference between pure and applied work is one of motivation and goals, and not of techniques and creativity. In pure research one is concerned primarily with gaining a new insight or in the discovery of new knowledge whereas in applied work the objective is to meet some urgent felt need in industrial or agricultural development or production. Therefore applied research of necessity carries a time schedule limit for its completion.

Applied work such as developing important new techniques or designing or fabricating special instruments or apparatus should receive proper recognition and it should be made possible for such work to earn Ph.D. awards. Whereas in the case of pure science a research contribution must bear international comparison to be of any value, the same is not equally valid in the field of applied science. In the case of pure research the value of a contribution in a particular field lies in the stimulus it provides to research in that field, but in the case of applied research the value of contribution lies in the stimulus it gives to the development of instrumentation, processes and techniques.

Professor P.M.S. Blackett, President of the Royal Society (UK) and a Professor of Physics at the Imperial

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College of Technology (UK) in his discussions with the Education Commission (the Kothari Commission to be precise) particularly stressed the importance of applied research for India. This necessarily implies close and intimate cooperation between research in the universities and that in large industrial houses and concerns. The problems of industrial research need to be jointly tackled on a cooperative basis by staff in the universities and engineering institutions as well as those working in the industries. In the long run, the universities should develop some concrete kind of extension services analogous to what is obtainable in the agricultural universities. There could and should be a movement of staff from university to industry, and vice versa. Consultancy and advisory positions and even directorships in industrial concerns can be offered to dynamic academic people so that effective and successful interaction and its much-needed by-product are well established. In West Germany industry has put up research institutions in collaboration with some of the university departments, and they work together closely on many projects. This is worthwhile implementing in India wherever conditions and facilities are favourable.

In the Commonwealth of Independent States – CIS (formerly USSR) educational institutions work in close and active touch and collaboration with industry. A considerable amount of basic and applied research for industry is carried out in universities and other educational institutions and is paid for by industry. In certain specialised fields high grade industrial engineers and scientists work on part-time basis as Professors in educational institutions. Also, it is quite common for postgraduate students to do a part of their research in industrial establishments using industrial plant and facilties.

Essential Pre-requisites

In an article published in *Komsomolskaja Pravada* of 20th January 1966, Professor P.L. Kapitza had stressed the following essential pre-requisites for effective and long-lasting linkages between universities and industry : favourable material conditions for industry for learning and adopting new technology, adequate preliminary training in the industry concerned, and favourable moral and material conditions for the cooperation of scientists and university personnel with industry.

A survey should be made in India showing, for any recent year, how the university research potential is distributed along basic, mission-oriented basic, applied, and development research. Towards this comprehensive survey, initial efforts may be directed towards analysing the surveys made in the universities in various branches of science and technology, economics and management, and by statistically collating, compiling and analysing the topics of various Ph.D. theses in the universities and other institutions of higher learning.

One of the principal aims of the universities should be to make higher education more relevant to national needs and to forge forward and backward linkages of higher education with employment and economic development. There is need for restructuring of courses to bring about the necessary concern for relevance and use, application orientation, flexibility and diversification. Towards this end extension activities should be developed as components within each subject or discipline to provide for the necessary linkage with industry as well as with financial and other infrastructural institutions. The development of interaction between the university departments, industry, and apex financial and development bodies should be on an institutional basis to be long-lasting.

Within the country there are enormous differences between infrastructural facilities and capabilities available in specialised scientific agencies, national laboratories, industrial undertakings, and in the universities. These create in the initial stages disparities and become obstacles in forging linkages with the industry. The state universities in particular have been allowed to run down to an unbelievable extent. The situation needs to be remedied rapidly to bring about the desired linkages with industry. The weak coupling between science/technology infrastructure and capabilities and the production system in the country has led to an insufficient use of the science generated and a lack of appreciation by decision makers in government and industry of the capabilities in the universities. This can be remedied by completing the total innovation chain consisting of basic research, applied research, design and development, prototype fabrication, up-scaling, extension, awareness building, production engineering, design and consultancy, and production and services.

Relating science and technology to the objectives of planned industrial growth calls for goal-directed science and technology (S&T) efforts. Most natural linkages arise between two or more organisations when they are jointly engaged in accomplishing a task. This applies par excellently to industry and the universities. Representation of senior academicians from the universities on the boards of industrial enterprises and vice versa, agreements between industry and universities for exchange of personnel, etc., are some of the measures which can bring about the required conditions for forging these linkages. Industry must be made to spend an appropriate amount on research in universities from which they would directly benefit. Similarly, while setting up separate S & T and R & D units within and outside industry, it should be ensured that they have the desired formal linkages with the higher educational system in the country. Universities should be encouraged to take up applied research of value to the regions in which they are located functionally.

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New Horizons for Managerial Women in Sports

Kiran Sandhu*

Stop right there ! against all the odds of complexities of sports programmes, politics, pressures and the sophisticated machinery of sports administration !! Women in sports are far more capable than they are thought to be by themselves and others. They have the talent, the potential but they need to decide to make a choice to avail of the emerging opportunities in sports. They hold the key to survival and success of sports in society. Today, instead of looking for others' viewpoint, they need to identify their strengths and weaknesses for them to act like an anchor, holding things down and chalking new directions. Since the inception of 'institutions' women have developed with men as a human race in all walks of life, whether it be science, culture, education or sports. The perception has however varied from society to society and hence, distinction between men and women have distinct presentation. For instance, a bleak picture of participation of women in competitive sports and sports management is revealed by the history of Olympics and International Olympic Committee the apex body of sports in the world.

There was a time when attitudes and distinction between men and women in reference to sports arena were ideally illustrated by the statements like, "A horse sweats, a man perspires and a lady glows". But, today women in sports have come of age, no longer sweating is a sin, nor sports women a social outcast. A new vocabulary has set-in, like chairman of a meeting has become chairperson, fathering as a rule has started accepting mothering. Instead of women in sports having to change themselves to meet society's expectations, society is also making concessions to them. Sports also has got a social acceptance for its being visible avenue for excellence, recognisation and a way of life. Women too take to sports to strive and compete for excellence to eliminate many controversies surrounding the women in sports. It is quite obvious that women's endeavour in sports do not necessarily mark their contentions for women's rights, but are for the same reasons as those of men including the underlying sense of accomplishment of a task, achievements of the targets and personal satisfaction inherent in sports. Like men women also undertake challenges and strive for life, not in isolation, but surrounded by cultural modes, prejudices, expectations, and social sanctions. The nature of such social-psychological modes do not shift rapidly but affect to a great extent. In view of sports participation and sports management being complementary to each other, role of either equally affects the environment of sports including women in it.

Nothing succeeds like success. But, when a woman is represented as successful, it is often assumed that she must be a sort of genious or a special person to have made it in spite of being a mere woman. The question of concern is why such a feeling of discrimination against women sets-in in the orbit of sports management? Perhaps, because women in sports management is an emerging trend it is expected to get a worst care, for no other reason than its being new and first few in the process of getting tuned to the rest. Women can be greater success provided they realize that one of the best ways to become equal is to begin to feel equal. Women must believe in themselves and must act important to be important. Women in sports management must continue to talk about quality programmes for sports, not power and debate what is right, not who, to befit themselves and their programmes. The traits of women like 'women institutions' are valuable resources indeed. Such traits of women which men do not possess are dependable source of strength and should be further explored for benefits to women in management. Women with her qualities and feminity can understand better all those reasons for any discrimination against them and without dwelling on it use the same knowledge to their advantage for furthering their success in sports management. Literature indicates that in order to compete with physically stronger men from an early age women find ways to compensate. They sharpen their wits, develop a sharper intelligence, acquire quickwittedness and habit to attend to small details. It is also indicated that women generally are less flustered and embarassed and retain their self possession longer under adverse circumstances. Their tendency to need others and to affiliate is a positive trait which makes women more skillful, thoughtful and tactful in inter-personal relationships, which also helps them anticipate problems, formulate solutions and plans for their actions. They being calm and objective can struggle and survive as well as master the art of gaining the power by soft means.

Failings and Exigencies

Even at the turn of the century, the most unpredictable element is what makes managerial women a success in sports? In fact, it is the net result of various interactive factors like environment, staff structure, budget and facilities, aspirations and needs of the masses besides personal characteristics, motivation and the like. As far as women in sports management are concerned whether they belong to sports cadre or not and how far exposure to sports arena is a contributory factor for being successful is yet to adduce more evidence for any claims. However on the basis of common experience and available literature, without indulging in generalisations it can be said that some of the inadequacies are common to many a woman in management, such as women :

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- do not take criticism well; they tend to take matters more personally, thus assuming that they have failed, they begin to doubt their capabilities, lose self confidence, feel hurt and vulnerable.
- do not act on their own, and rather wait to be told for further action line.
- very rarely indicate their wish to be ambitious, rather they wait to be selected or promoted, this is one way women do not acquire power to benefit both themselves and their departments.
- seldom master their emotions and a fear always remains of their collapsing under pressure.
- want to be linked and fail to realize they must accept the fact that some of their decisions will be unpopular. They should not forget that respect is far more crucial than popularity, provided the decisions are in the best interests of the departments.
- like to have the right to know what and why they carry orders but they do not question because they are conditioned to do so by the stereotype training to love, honour and obey the orders and master rather than exert for their existence.
- have a poor self image that they are poor managers, but the women who believe that they are capable of being successful only can succeed.
- often have a tendency to carry grudges and stab each other in the back. They smile at the adversaries but they criticise them to others, whereas they should speak out what they think of them to their faces and get over it. They should not let their emotions dictate their relations with others.
- have a tendency to be so concerned with accomplishing the tasks in hand that they fail to chart a course of action for tomorrow, thus over focusing the present and lack of future planning result in keeping women away from becoming equal to other superiors in management order.
- are often not willing to leave the security, comforting familiarity, and the sense of belonging to a place because of the fear of only confrontations of a new and quite different people and problems at the new place. Such an attitude leaves them unadventurous and stuck up within a limited arena only.
- perform a task in order to seek approval from their superiors instead of feeling satisfaction in accomplishment of a task. That leads them towards a sense of insecurity specially when they do not receive positive feedback.
- often make their job narrow in scope by over-investing in specialisation whereas they should be expanding by adopting generalisation which is a key to successful management.
- have a tendency of accepting any and all types of work thrown at regardless of the order of priority and liking for it, which prevents them from making most of the valuable time.
- become burnt-out, tired and irritable because of their lack of trust in others of doing the job right, such a tendency results in failure to delegate responsibility and in creating a sense of involvement in others.
- are subject to charges of failing as 'traditional women' because they are not able to resolve between the self image and their management identity.
- do not either understand the games of politics or do not try to know how to infiltrate the power-yielding bodies around them.
- often find themselves bored or irritated by their jobs because they view their jobs as just a way to make a living instead of a challenge, a way to prove and move on.
- are not able to get adjusted to their subordinate role. Often, instead of placing weight on demands and expectations of the seniors they stick to 'their-self' in a rigid manner and are not ready to compromise, thus they distant themselves from the authority, the Job, the situation and chance of making it for the next job.
- neither commit themselves to sports causes, nor get involved with various working bodies because they are getting overburnt and over burdened with routine work and fear reprisal. Such a failure of getting involved show a lack of ambition to superiors and also set poor example for subordinates.
- complain about rules, the lack of good officials or such major issues but they do little about correcting the problems.
- Over-react by putting too-much importance to detailsat hand and fail to overview the situation. It is not that solving the problem at hand is not important, butwhat counts is the amount of importance put on the problem, if objective-view of the situation is lost, the situation as it really is cannot be seen and it affect one's decision making ability.

Some suggestions on the methods for gaining success by women in sports management are as follows :

Status, Stability and Progress

It is absolutely essential that women chart a course of advancement; they must have clearly stated long range career goals. They must accomplish some specific activities each year striving to gain confidence, build ego-strength, and self concept as well as make way to meet future aspirations for a career or achievement of long range career goals. Women should set their goals after a thorough process of analyzing, evaluating themselves without any confusion or conflict. Women should be very clear that what kind of job do they want and where it is; what is the level of education, skills, experience and competence it requires? Besides, it also goes a long way if it can be assessed that who are the people to offer the job and how can they help and what can they teach to her? Whether all this is in line with her aspiration of career or not? After getting into the job, a primary method to survive and advance is to become very visible inside and outside the institution, which can best be accomplished by writing articles, publishing papers, developing workshops, attending meetings, volunteering for committees, running a successful department, interaction with media and the like.

A woman also can keep herself informed of various openings available and should never stick to secretarial type duties or use gender to go ahead and should never be afraid to shoot for the top.

Managerial Contentions

Since women in sports management is an emerging concept and the lack of ideal models results in either adopting a male role model or to develop one's own concepts. In the prevailing circumstances it is suggested that women should observe other effective managers and administrators around them to see the techniques they use. One of the guidelines for best managerial style is built around getting the job done, which can include receptive, permissive, productive and over controlling approach or a style which works for very short period an exploitative. However, women can best succeed when they draw on their sensitivity, intuition, persuasive techniques with assertiveness which can prove a key to success. Such an approach will allow women to express their feelings openly and honestly – help her stand up for what she feels are her rights, besides improving her intellect as well as decision-taking ability. Over and above every thing, women if desire to fare better should demonstrate that their only concern is to accomplish the task in the most effective way. Also they must learn to incorporate individual personality characterstics into their managerial style to emphasise their strength and minimize their weakness.

Personal Skills

(a) *Accepting the criticism graciously*

Women must learn not to be defensive when criticized. The comments are seldom directed at them personally, but at their method of accomplishing the task. Instead of making excuses or becoming angry it is better to thank the person for the concern shown and note to do better next time. Since it is accepted that no one can be perfect, few mistakes are expected. I feel, women need to become more thick-skinned and start drawing satisfaction from a well done job instead of seeking approval from others. Often under the fear of getting criticism for wrong decision, we make worst of all, no decision. Since part of learning process involves trial and error, mistakes should not become source of frustration rather one should live-up with self confidence.

(b) *Delegating*

Women in sports management should learn to delegate responsibility to all working with her after identifying their capacity and aptitude for various jobs. In the process, the first thing is to choose people who are dependable, the second is to establish a chain of command so that everybody knows to whom they report. The third is to control them through evaluation, objectives, goals and dead lines.

(c) *Providing an outlet or a method or releasing pent-up energies*

Women in sports management get too involved in day to day routine to the point that they become burnt out, they also need a change – be it sports, hobbies, a cause, family or friends. Taking time out for herself allows a woman to regenerate, to renew her strength and her tolerances for bothersome problems. Such a change from work will bring her back afresh to think better under pressure. A priority list of every day help her tackle some important tasks and leave some others for the next day instead of going home with worried mind – and guilt of an incomplete day.

(d) *Controlling emotions*

Just because women tend to express fast their emotional feeling should not mean that men are unemotional. Breaking out into tears, losing temper when women are criticized, challenged, left out, etc. is a common trend. But, women must learn to control the emotion and of course should be able to anticipate the situations which upset them. To avoid such situations she can excuse herself to go to office, look into another file, attend a phone call, attend to another visitor or an appointment with colleague, or can postpone the matter for a later stage.

(c) *Taking risks*

Women must realize that when they become highly visible because they have done a good job, they will create enemies. Because whenever some one will commit themselves to a stand, some one will have to be there to oppose it. So women must be prepared for it. Risk taking always accompanies decision making. Greater is the risk involved when we rise higher. No progress can be made without risking something, may it be a job, security, tradition or money, etc. The unwillingness to take risk by sportswomen is one of the factors that prevent women's involvement in sports. Hopefully the incoming sportswomen who have competitive experience and took chance on sport-fields to win will not be reluctant to accept challenges and risks involving job.

(f) *Over-investing in a skill*

Over-investment in mastering a skill takes one away from the understanding of other aspects of management one can undertake. It is suggested that women should expand through administrative courses, degrees, also by observing seniors, by attending professional meetings and by asking for additional duties on apprenticeship basis.

Towards the generalisation and understanding of sports management, women are expected to be more visible by being willing to take the time for committees, community services, co-ordinating groups, writing reports and speaking to the groups, etc.

They should be more aware of themselves, of their characteristics, the kinds of things they like to undertake as per physical, mental, emotional, economic and social make-up.

They should remain curious to ask questions, to watch people whom they like, arrange to accompany teams, and look forward for an interaction with people wherever they go. They need to strive to know how programmes are planned and who planned them.

They should be able to share problems, talk to people who can criticize and give suggestions, for example asking the seniors what they used to do when they were your age.

They should be more prepared to find out about the requirements and opportunities of the job, keep biodata complete and make the best out of the given opportunities in life.

Voice and Authority

Women need to develop voice, authority and power in themselves, among the group and in the institutions. To start with, they must be able to assess the most influential ones in the power network, identify them as who they are, which are sympathetic and which are not, as well as their likes and dislikes, etc. Efforts have to be made to tackle the entire group for establishing rapport with them to become part of inner power circles. Another way for women to have better hold is to present themselves as someone worth investing in, as someone who can make a return on the help she has received. Often, in such a course of action to develop power women get mentors in a friend or in a colleague. However, relationship between the women in management and the mentor should avoid any indication that either is socially interested in other. Rather an receptive attitude towards teaching and learning can bring the best results. Some of the other means by which women can enhance their power is supporting the male colleagues who support women; by learning everything they can about the budget; by starting women's causes; by establishing an equivalent informal network of women to have opportunities to exchange informations; and by pushing the efforts to advance to and be moral support to each other in the group. Visibility and publicity are other powerful tools towards generating authority. A reputation based on personal and official achievements will elevate women in the eyes of her superiors and she will gain confidence and position to take advantage of new role.

Essentials as Back-up Support

Quite often it has been reported by women in sports management that they are over worked, they are beating their head against the brick wall, their future is only getting worst instead of better, they want to be giving up, they are stuck-up with situation and have become lethargic, rather they have given up the will to fight out and advance for betterment. The reasons for such phenomena are numerous, it is not possible to go into all the details here, part of the problem has to do with women inheriting additional responsibilities for which they were not prepared, nor have they the time, enthusiasm and energy. Another major part of the problem is the socialisation into sports as a professional. Whereas, men have been socialising into sports as profession, but for women it is an emerging trend. The male value system of working long hours, saturdays, sundays and even on holidays devoting to them is quite accepted by now.

So to make their jobs, easy, attractive and manageable, some effort must be made to handle them more effectively with result oriented approach. First, women must be given adequate compensation, time off, and administrative cooperation. Secondly, women in sports management should not be required to coach more than one team, preferably it should be a non-coaching post. Next, it will be wise to prepare details of job descriptions for the benefit of administration, so as to give clear idea of tedious job being undertaken by women in sports. It will be more fair and helpful if workshops, clinics, internships could be designed in the process of preparing women for sports management. It will go a long way if rotational off systems are introduced, helping women to work on holidays, so that they can attend to their personal/social commitments. People in the institution should be asked to volunteer for job they prefer. Instead of assigning them, they should be provided a sign up sheet and a list of jobs to be done. Handbooks or checklists may be designed to see to it that work does not suffer even if it changes hands in sports management.

Sports as a Channel for Training

Today sports is an accepted phenomenon valued for its extensive teachings that competitiveness is a necessity in life, success and achievement are desirable, they are worth disciplining oneself for, it provides educational experiences. The prevailing theory of values of sports also indicates that better sports programmes develop more aggressive and assertive women with confidence, who value personal achievement and have a strong sense of identity. Through sports, women get a regular experience of performing before others, and are fearless of running for management and are able to take public positions on the issues in the face of public opposition in a better way. By working through sports for a balance in physical activity women indeed begin to achieve a more wholesome, democratic balance in all phases of life. Women in management who do not participate in sports lose out the training lessons of team work, preparation and practice, recovery after being knocked down; values of sense of belonging, the need of a leader, the necessity to learn fast, the importance of co-operation, the acceptance of losing, the ability to take criticism well and the like. Thus participation in sports will help women find an inside road to management success by acquiring many of management skills in competitive environment. Women from sports background certainly can have some additional skills that will make them better than non-sports women once they overcome a few other discussed managerial deficiencies from which most, if not all, women in management suffer.

Considering all such factors and viewing women as an institution, more opportunities need be provided to widen the areas of participation and sports management alongwith orienting all participants through extension lectures, training of leadership, providing an exercise on model roles of management and exposure to actual management in sports in order to derive optimum value and specific role as an asset to the society at large. Lastly, women must realize that they are not expected to be perfect and have limitless energy. They are only expected to put in their best effort. There are expected to be more realistic. The world can't be changed in a day and no matter how assertive they are they may be interpreted to be aggressive. Be willing to be flexible, be willing to work with others, be willing to share and give credit to others but also don't forget to be willing to take credit yourself in the process of formation and reformation of the Sports World.

References

1. Bil Gilbert and Nancy Williamson. Women in Sports-III, **Sports Illustrated** June 11, 1973.

2. Cary L. Cooper. **'Women in Management'**. London, Heinemann, 1984.

3. Marcillie Grey Williams. **The New Executive Women.** Radner, Pa. Tilton Book Company, 1977.

4. Margaret Henning and Anne Jardim. **The Managerial Women.** Garden City N.Y. Anchor Press/Doubleday, 1977.

5. Martin K. Starr. **Management : A Modern Approach.** Delhi, Frecman Book Company.

6. Marry Ann Willson and Eric W. Allison. **Managing up, Managing Down.** New York, Simon and Schuster, 1986.

7. Patsy Neal and Thomas Tutko. **Coaching Girls and Women! Psychological Perspectives.** Boston, Allyn and Bacon, 1975.

Linkages Between the Universities and Industry

(Contd. from page 8)

Cross fertilisation between universities and industrial organisations is more than just desirable. It is essential for excellence to flourish. It is also necessary to develop industry- oriented centres of excellence, and it is all the more necessary to strive to maintain that level of excellence in those institutions because excellence is a vulnerable entity even after it is established or attained.

Basic research is concerned with the discovery of new knowledge and with increasing our understanding of natural phenomena. It may not be directed towards solutions, but is at the frontiers of knowledge. Higher education is primarily the responsibility of the universities, and quite clearly there must be basic research in the universities in the overall interest of higher quality of education. Basic research is important not only for its own sake but also because of the solid and permanent foundation it provides for applied research and development (R&D). The dischotomy between basic and applied research is, in an important sense, intrinsically artificial. They are related to each other as Siamese twins. Know-why is as important as Know-how. Basic research without applied dimension is theory without measurement and applied research without basic research is measurement without a theory. A sound and judicious wedlock between the two is essential to guarantee beneficial fruits to the society. Hence, to ensure cross fertilisation they must go to bed together.

Any research, or education, for that matter, must be both light-giving and fruit-bearing. This perspective alone provides the rationale for forward and backward linkages between the universities and the industry. Basic research to the exclusion of researches in its applied dimensions is jejune and infertile. As Werner Von Braun once rightly said, "Basic Research is what I am doing when I don't know what I am doing".

Agriculture in Maharashtra

Hon'ble Shri Sharad Pawar, Union Defence Minister, delivered the Convocation Address at the seventeenth convocation of the Mahatma Phule Krishi Vidyapeeth, Rahuri. Shri Pawar exhorted the farm scientists to use advanced techniques to improve productivity and raise the living standards of the farmers. Excerpts

The world is marching towards 21st century. Lot of amazing achievements and progress is observed in science and technology. Marvellous revolution is taking place in mass media. New experiments are conducted in technology. Astrophysics, space science and bio-technology are giving new technology to the world. These sciences are also affecting the farming and the scientists should study how the advances in science and technology can be used for improving the farming and betterment of farmers' life, and should utilize these findings in the farming and for farmers.

In the last one and a half decade the farm techniques and crop production technology has not only changed but revolutionised. The total food production of our country has gone upto 178 million tonnes and by the end of this century the foodgrains production of the country will be 225 million tonnes. Moreover there is a shortage of oilseeds and pulses on large scale. The sugar production has gone up spectaculary and is expected to reach 120 lakh tonnes. In order to meet the increasing need of foodgrains of regularly increasing population, their is a need to increase the rate of agricultural production. Though Maharashtra State is not self sufficient in foodgrains, a revolution is being brought due to horticultural development programme launched in the country. The fruits like ber, pomegrante, grapes, chikkoo etc. are now a days seen in rural market. Milk production has also increased markedly. Once upon a time in Maharashtra State the milk was brought from outside the state, today Maharashtra State is supplying milk and milk products to other states. Though these are some of the things which make us happy and give satisfaction, some other things that must not be neglected are adopting the improved farm technology, and using available facilities and resources. Agricultural production be increased by minimizing the cost of crop production.

Agriculture in Maharashtra

Farming in Maharashtra is predominantly rainfed and only 13% cultivated and is irrigated. The drought prone area is increasing, the ground water is depleting regularly. Scientists are bothered and fear that in near future Maharashtra may not become a desert. Maharashtra is the pioneer state in rainfed farming research in the country and the research carried out at Sholapur has given very useful recommendations to the rainfed farmers. This has benefited the entire nation. Though the research contribution of the Dry Land Farming Research Centre, Sholapur coming under the domain of this university is noteworthy, in view of the increasing population and limited natural resources, there is a need to modify and suitably change the agricultural production pattern in the Maharashtra State. The rivers in the Maharashtra are not flowing throughout the year. There is a need to study, on priority basis, how the rain water received during rainy season can be used effectively and efficiently for crop production. This needs not only the participation of scientists but farmers too. While undertaking and conducting research on this topic on priority the projects like Ralegaon Siddhhi and Vadgaon need to be kept in mind, then only the dry land farmers will get an assured farm income in coming years. Management of watershed and drought prone areas is very important for the progress and development of the Maharashtra State. The agricultural universities in the state should take leading and guiding role in this matter of managing the watershed and drought prone areas in their jurisdiction, and should guide the farmers. Crop according to soil type and use of available irrigation water effectively, these principles need to be stressed.

Use of available water efficiently

If we consider the environment in global terms only 1% water is available for domestic use, irrigation and other purposes. If we consider the enormous water wealth of the Maharashtra State, its efficient and economic use in every field is a important matter. Those who are getting the benefit of canal irrigation, should not remain under the disillusion that water is unlimited and can be used freely. The canal water available in Maharashtra needs to be utilized effectively and efficiently for obtaining higher production and there is a need to make special, conscious efforts for this.

The Farm Scientists of the University have done useful research on how to use available irrigation water effectively and efficiently. Drip irrigation system is being adopted by the farmers in Maharashtra State. Moreover drip irrigation is used in other states too. This university has given an impetus to this innovation and has provided guidance to the farmers, but the problems faced by the farmers in adopting drip irrigation system also need to be studied. The researchers should not only consider the water saving aspect in drip irrigation but also as to how this system can be made productive and remunerative. The watershed development programme should be used for raising fruit crops, vegetables crops, flowers on drip system of irrigation and this needs to be considered from all angles and accordingly an action programme developed.

Improved crop planning

The farm land of Maharashtra have an undulating topographly and is of varying depth. Out of total land area 40% is less productive and poor in productivity, only 25% lands are rich and of good quality. The crop planning needs to the done by considering the differential climatic conditions and the rainfall received. The poor soils should be used for raising horticultural crops and other tree species, fodder & forage crops which are remunerative in such soils. This will increase the production, and will solve the problems like shortage of fund, fodder, forage crops. Moreover it will check the erosion of the soils.

Remunerative farming

While considering the remunerative farming. Two alternatives are put forward. Firstly, while increasing production the productivity should also be increased. Secondly by generating employment opportunities in such fields which are based on agriculture and can be alternative to agricultural employment. It has to be borne in mind that this employment needs to be generated in such rural areas. The increase in fruit crops and vegetable farming should provide opportunities through developing process industries. If the farm produce is processed on scientific lines after harvesting it is estimated that the 25-30% loss of farm produce will be saved. Moreover food process industries will provides employment opportunities to many people. The sugar factories have brought a revolution in rural Maharashtra. One should not be contented with the development brought about by the co-operative sugar factories so far but how this idea could be used in cotton, oilseeds, vegetable and fruits processing industries should be seriously considered. Fresh fruits and vegetables have reasonable demand in foreign countries. The programme of exporting fruits and vegetables need to be tailored and planned by considering the needs of foreign buyers. Moreover processed farm produce and food products can be exported and thereby it is just possible that farmers will get additional money and from this point of view foreign markets need to be studied and tackled.

Different types offlowers can be grown in Maharashtra climate and soils. By exporting the flowers money can be earned by farmers. From this point of view, research on flowers needs to be undertaken. Private companies are comingforward in this field and they are doing well. There is a need that agricultural universities take a lead in guiding the farmers in this matter.

Biotechnology : A need of the time

Today biotechnology is being talked of by everyone and people are mesmerised by the miracles brought about by biotechnology and related techniques. Biotechnology has great scope in agriculture. It includes biofertilizers, application of Rhizobium to the seed, genetic engineering, tailoring of chromosomes & genes, whereby, scientists can bring about desirable changes in crops. The time has come for the application of biotechnology to solve difficult problems in farming and have disease free seeds, seedlings. Improved seeds of banana, ginger, turmeric can be developed and supplied to the farmers. Biotechnology has been used in animal breeding and husbandry. Using embriotransfer technique improved, cross-bred animals giving higher yields can be developed.

Aurobindo's Pointers on Education

(Contd. from page 2)

success ? Success that is measured undeniably by social standards. Standards that we, as members of that society set. Success that is gauged by man's bank balance. And his money, ironically, is the root of evil, Spirituality, and a consciousness of the Divine that would keep away this evil, have all lost meaning in this world, and religion has degenerated to mere ritual. Result : evil is rampant. Sri Aurobindo's Yoga is aimed at a regenerated consciousness of the Divine, and this will slowly eliminate sorrow and evil. To bring about so radical a change will take centuries. But to make a start : condition the young mind towards this change. The best way to do this is to educate him to it. Hence this system of education. It must be remembered that none of the essential or necessary functions of the world and society are neglected or frowned upon. The practical education embraces all of these, and the students who are receiving this sort of education, we can see, are not any more removed from this world than we are. But they certainly have a better idea and knowledge of what they are being taught; something that most students cannot claim today, and their academic training works towards this end – usefulness of theory in practice, towards construction and building up of a better life. In this better life, money is not the thing that matters, material gains do not merit primary satisfaction.

The vast difference inherent between peoples will undoubtedly cause enormous hurdles, if such a scheme were to be implemented all over. Money has apparently come to stay as the most important thing in this world. Against this giant, a pattern that rejects its influences finds it well nigh impossible to establish itself. But perhaps while overhauling the system, the salient features of these challenging ways of teaching could be adapted to infuse some life blood into the practically nerveless, lifeless, and hopeless system current in India today. Man must return to God, at some point in his life. Perhaps if the seed is sowed in the vital formative years, he will go back instinctively, after all those wasted years when the numerous distractions in this world will keep him occupied and he denies his God but then God's best advocate is the atheist. In the process, his body and mind are also guided towards a healthier and a more useful existence. Man will finally mean something to himself and his world. From this start, education may slowly concretise and come to be what it should be. Therein lies our hope.

South Zone VCs Meet at Mangalore

Prof. G. Ram Reddy, Chairman of the University Grants Commission has emphasised the need to improve the internal efficiency of the University system. Inaugurating the South Zone Vice-Chancellors' Conference held on 2nd October 1992 at Mangalore University, he said there were several universities where admission did not take place on time, examinations were not conducted on time and results not announced on time. The academic calendar was upset and fell two years behind schedule.

"I think the State Governments need to pay attention to this basic aspect before we think of grand programmes. Only then can we restore the credibility of higher education," he said.

Regretting that 60 to 80 percent of the expenditure of various universities was on salaries, he said as a result there was hardly any money left for non-salary items such as library, laboratory and hostels. He said money should be allotted for the development of these important and urgent requirements.

Questioning the teacher-student ratio in our universities against the 1:15 to 18 ratio in western countries he wanted the Vice-Chancellors to ponder over this aspect.

Prof. Reddy also stressed that national integration would have no meaning unless there was a free flow of students and teachers from one part of the country to another. Loss of mobility, he said, had posed problems for children of defence personnel and Central Government employees who were transferred from place to place.

The Programme of Action has suggested that the UGC and State Governments should encourage universities to provide for an additional 10 percent seats on a supernumerary basis in each postgraduate department for children of employees with all India mobility and non-resident Indians.

The other areas identified for particular attention are expansion of institutions, development of autonomous colleges and departments, redesigning of courses, training of teachers strengthening research, creation of structures for co-ordination at the state and national levels and review and monitoring.

"We have been talking about reforms for a long time; there is no dearth of recommendations to improve higher education in the country. Our problem is with implementation. We have been postponing implementation but I am afraid it would be difficult to postpone these any longer. This is our moment of truth and of action," Prof. Reddy added.

Dr. Armaity S. Desai, President, Association of Indian Universities, who presided, stressed the need to undertake a thorough examination of funding of the University system at all levels. She hoped that the UGC and the Ministry of Human Resource Development would see the imperative need for undertaking such a study in the not too distant a future and complete the task within a reasonable period of time.

Dwelling at length on this issue, she said that, "in the meetings held by the Planning Commission and the Minister for Human Resource Development the message was unambiguous – the Universities were expected to raise their own resources. On the other hand, we have a recent landmark judgement by Justice Kuldip Singh of the Supreme Court, in the case of Mohini Jain versus the State of Karnataka and others. The judgement struck down the system of charging capitation fees wherein financial means and not academic merit weighed for admission. On one hand, the Government's message was leaning towards the privatisation of education as an enterprise, on the lines of industry, business and other sectors, while, on the other, the highest court of the land had done well to point out the constitutional mandate, that is, the right to education being closely related to creating the necessary condition for living a "life with dignity". However it had left some questions unanswered as to the levels of education up to which the state had to provide it, as a right, at reasonable and affordable costs to the individual, she said. As the Constitution had limited it only to elementary education till the age of 14, this issue needed careful examination, she added.

Regarding the complaint of State Universities that the Plan period grants of the UGC lapsed because the State Governments do not commit their share of the expenditure, she felt that this urgent issue required representation to the Finance Commission to earmark specific allocation for higher education.

The conference was attended by Vice-Chancellors from Andhra Pradesh, Kerala, Tamil Nadu and Karnataka. Apart from main theme of funding of universities the other topics discussed at the coference included (i) full recognition for internal assessment; (ii) due place being given to physical education in educational programmes; and (iii) sharing of the expenditure incurred by the universities on the assessment of research students registered for Ph. D degree on the request of outside institutions.

Prof. M.I. Savadatti, Vice-Chancellor, Managalore University welcomed the delegates while Prof. S.K. Agrawala, Secretary, AIU, proposed a Vote of Thanks to the host university.

Management Development Programme for University Administrators

A training programme on Management Development for University Administrators including IITs, National Institute of Fashion Technology and many other central and state universities was recently conducted by Centre for Human Resource Development (CPDHE), Delhi University. The main focus of the programme was on optimum utilization of resources and change of attitude including management of strategic issues in university administration, office management, university culture, financial management, material management and inventory control, computerisation in education system and office automation including inter-personal relations at work. The preliminary objective of this programme was to help the participants in refreshing their professional knowledge in their respective functional areas in view of the vast explosion on the frontiers of knowledge and innovative developments in technology. The training was designed to bridge the gap between theory and practice keeping in view real life situation problems in backhome situation.

Welcoming the participants, Prof. N.K. Oberoi, Director, CPDHE, mentioned about the urgent need and tremendous scope for such type of training programmes for university administrators at the national level. He also mentioned that this programme would add new dimensions to the existing knowledge of university administrators since the programme was broad based and offered enough opportunities for experimentation, innovation and improvement of existing methods and practices. He gave some practical illustrations from his own experience regarding administrative problems and tentative solutions within given constraints.

Inaugurating the Programme, Prof. S. Neelamegham, Dean, Planning & Administrative Reforms, Delhi University, mentioned about various characteristics of university environment for acquisition, transmission and application of knowledge with the help of latest technology and management practices. He also said that in university system there was freedom and flexibility to work and enough autonomy for trying new areas. He also emphasised the need of sharing values and reforming the structure, system, style, strategy in the organisational context. The qualitative performance and effectiveness of university administrators could improve many times through exposure to new ideas and management techniques including computerization, he opined.

Prof. M. Adhikary stressed the need of improving university culture by inculcating innovative values through definite goals and objectives with set priorities within the organizational constraints. He enlightened the participants about the necessity of team work and motivation with a emphasis on the need of regular upgradation of knowledge, through these training programmes. He also mentioned some of the cases related to disciplinary problems dealt by him in his capacity as University Proctor.

Mr. Abhimanyu Singh, former Director, Higher Education, Ministry of Human Resource Development, advised the participants to develop a sense of professional pride for evolving better work culture & methods. He emphasised the greater need of training and management development programmes in universities aiming at improving upon managerial capacities of the university administrators besides strengthening the management information system. He also mentioned about the role of the government in improving efficiency and effectiveness of university administrators through various career advancement schemes and hinted at the latest report of the Ministry of Human Resource Develop-

AIU'S ANNUAL GENERAL MEETING

The 67th Annual Meeting of the Association of Indian Universities (AIU) earlier scheduled to be held from November 17 to November 19, 1992 at Pt. Ravishankar University, Raipur would now be held at Pondicherry University, Pondicherry on December 20, 21 & 22, 1992.

The change has been necessitated because of the continued disruption in the flight schedule.

The Vice-Chancellors/Directors of member Universities/Institutes are requested to kindly bear with us and to kindly note this change of venue and dates.

Secretary, AIU

ment regarding setting up an appex institute for training of university administrators. Since the total number of non-teaching staff in universities was more than double the teaching staff the training played a vital role for non-academic staff, he added. He emphasised the need of a core group of trainers with a necessity to create a cadre of training faculty from amongst the existing officers of the university. He further emphasised the networking of training system in universities so that maximum number of administrative personnel could be trained.

Dr. P.K. Seth, Director, University Grants Commission (UGC), narrated various issues and problems in increasing administrative efficiency and effectiveness in universities and the role of UGC in implementing and coordinating various activities of university system. He also complimented Delhi University for its efforts in forging closer ties with other universities as was evident from the participation in the training programme.

Mr. R.R.S. Luther, DGM, Engineers India Ltd. (EIL) stressed the important aspects of planning and controlling office work for higher productivity coupled with managing time for results with a focus on efficiency and greater accountability. He also emphasised the importance of creating awareness about environmental factors to examine the various aspects of opportunities and threats.

Prof. Amrik Singh, Former Vice-Chancellor, Punjabi University, talked about student services and role of university administrators in improving the same with the help of areas of weaknesses where services should be strengthened and stressed the regular need of training programmes for giving new ideas for self-development and development of others.

Dr. V. Ramachandran, Senior Accounts Manager, International Airport Authority of India, discussed the material management emphasising the need of purchase of right quantity of material at right time with right price for achieving maximum economy. He emphasized the periodical stock checking for tallying the book balance with floor balance to identify fast moving, slow moving the non-moving items related to stores. He also gave very useful hints about inventory control and its various techniques including ABC analysis, economic ordering quantity and application of appropriate ratio analysis.

Mr. H. Narang, Senior Consultant, Tata Consultancy Services, talked about office automation in universities with the latest trends in computerisation. He mentioned various functions of departments dealing with massive data to be processed for computerisation and narrated in details the utility of integrated systems. He suggested various steps in office automation keeping in view the incoming hardware and software advancement with examples from his real life experience based on the computerisation activities of IIT and University of Delhi.

Mr. V.K. Rastogi, Dy. Director, Centre for Human Resource Development, Delhi University, spoke on "Managerial Effectiveness through Self Awareness" and stressed the importance of self awareness, interpersonal styles, team work and a deeper insight into our own behavioural patterns. He briefly described various approaches to understand self for enhancing interpersonal relations and effectivness.

A field visit was conducted to Centre for Development of Telematics where the participants were exposed to the culture of computerisation conducive to innovative and creative ideas.

In his valedictory address, Prof. A.L. Nagar, Pro-Vice-Chancellor, University of Delhi, appreciated the importance of growing role of administrators and administrative personnel in proper functioning of universities and emphasised the need of organising such training programmes at frequent intervals in order to expose the participants to the latest trends and changes in tools and techniques of administrative management in view of the vast growing changes in technology and management practices. He emphasised the need of computerisation for processing enormous data in admissions, examinations, recruitment and selection, etc. He also distributed Training Certificates to all the participants from various universities.

Computer Application in Social Sciences

A training programme on Computer Application in Social Sciences was recently organised by the Centre for Social Studies at Surat. Sponsored by the ICSSR (New Delhi) the course was meant for those engaged in survey research and data processing and analysis.

The training programme was aimed at instilling skills in using computers towards designing and analysing social science data in various ways. It was emphatic on integrated data base techniques and analysis methods aided by computers. The course included lectures on introduction to computer systems, survey research and codification of data, statistical techniques, operating system MS-DOS, user friendly packages and SPSS (Statistical Package for Social Sciences) with considerable input of practical training in the Centre's inhouse computer unit.

During the first phase of this training programme, some of the widely used user-friendly, interactive packages and hands-on experience of using them on personal computer were introduced. The lecture on survey research and coding dealt with the principles of codification and alternative methods and approaches and their advantages and limitations. The exercises were prepared on the basis of the Centre's own data base and experiences. Lectures on data transfer and data validation and verification techniques were also arranged. A lecture on data archival and retrieval methods was specially arranged to introduce the participants to the concept of data archive and its usefulness in social science research.

The next phase was devoted to statistical techniques and the operation of SPSS. Lectures on statistical techniques covered basic methods that a social scientist should be familiar with, such as measures of central tendency, measures of dispersion, measures of association, probability, sampling, correlation, regression, T-test, ANONA, etc. Features of SPSS were explained, in the light of the Centre's own experience. Problems frequently confronted by social scientists were given priority.

Bhoj Open University

The President, Dr. Shanker Dayal Sharma, said that the country could progress only if it respected and hourned the intellectuals and experts in all walks of life. Laying the foundation for the Madhya Pradesh Bhoj University in Bhopal recently Dr. Sharma expressed the hope that the new university would become an ideal institution and serve a large section of the State's population.

The President said that the country was confronted with the problem of scarce financial resources. The concept of distance education should be encouraged in view of the country's size as well as the need for providing higher education to youth, house-wives and those who were engaged in some profession but were interested in pursuing new courses, he said quoting the national education policy of 1986. The setting up of the Bhoj University was an important step in this direction.

Dr. Sharma said Madhya Pradesh was the biggest State in the country but at the same time the level of literacy was the lowest. This should be taken into consideration while framing the education policy of the new university, he pointed out.

He said the the new university should give adequate importance to science and technology in its curricula so that people could keep pace with the progress being made in other parts of the world.

He particularly appreciated the decision to name the new university as Madhya Pradesh Bhoj Vishwavidyalaya – after the famous 11th Century ruler who was known and respected for his deep knowledge, culture, art and science.

The Union Minister for Human Resource Development, Mr. Arjun Singh said the country was today at the crossroad and it was time for the people to take a fresh resolve for fulfilling the dreams of the future. He said that the universities would have to recognise the forces that were bent on weakening unity.

He assured the State Government that the Centre would extend full cooperation when it came to giving assistance under the new education policy.

Mr. Sunderlal Patwa, Chief Minister, said that his Government had demonstrated its commitment towards the spread of education by setting up the Makhanlal University of Journalism, Chitrakoot Gramin Vishwavidalaya and the Bhoj Open University. The objective was towards providing job-oriented education to the students rather than offering only degrees.

The Hindu-Hitachi Scholarships

The Hindu, in association with Hitachi Ltd., Tokyo, Japan, invites applications for three scholarships for technical training in Japan. Candidates who must be Indian citizens, should not have completed 30 year of age on 31-3-1993 and should possess a minimum Degree of B.E. or B.Sc. (Engg.) or its equivalent from any recognised university. Candidates with practical experience in the branches for which training is proposed to be given, will be given preference. At least one year's professional experience is necessary.

The Scholarships are tenable in Japan for principally six months commencing about July, 1993. Trainess may have general training in two or more of the following product fields of Hitachi Ltd. (Hitachi) : (1) Electric Power Station Equipment Hydraulic and/or Thermal (including allied equipment); (2) Rolling Stock (AC & DC Electric Locomotives, and Diesel and Diesel Electric Locomotive); (3) Elevators and Escalators; (4) Industrial Machinery; (5) Electric Home Appliance; (6) Communication Equipment; (7) Semiconductors and ICs, and other electrical or electronic products of Hitachi, being subject to the convenience of each of Hitachi's establishments.

Selected trainess will be provided with return Economy Class airpassage. Arrangements will also be made for free Boarding and Lodging for trainees in Japan, and to defray all expenses for travelling in Japan which may be considered necessary for their training. In addition, each trainee will be paid a monthly fixed allowance to cover his personal expenses.

Applications should be made in duplicate in the forms available on payment of Rs. 5/- from THE HINDU, Mount Road, Madras-600002 so as to reach them before 30th November 1992.

Accounts Management Course

"Training for all categories of employees has become the order of the day and more so for the supervisory personnel in every organisation in order to get better results," said Prof. A. Shankaraiah, Registrar of the Kakatiya University, who was the chief guest at the valedictory function of the 10-day training programme on 'Management of University Accounts & Audit' organised by the Training Centre for Non-Teaching Staff of Universities in India at Kakatiya University.

Prof. Shankaraiah said that in the face of growing activities of the service associations and unions in all types of universities and other organisations, the supervisory personnel could not afford to be authoritarian in their attitude and added that training of this type would help them to extract work from their subordinates by motivating them to work for the better.

In his presidential address Prof. V. Bhaskara Rao, Principal of the University College and Member of the Board of Management of the University said that the auditors and accountants should not only check the accounts but also play a vital role in apportioning funds to proper channels ultimately resulting in distributive justice.

Presenting the report, Dr. G.V. Bhavani Prasad, Coordinator of the Training Centre said that 18 participants of the rank of Assistant Registrars and Superintendents representing ten universities and institutes attended the training programme.

Seminar on Commerce and Management

The Uttar Maharashtra College of Commerce, Jalgaon, (North Maharashtra University), in collaboration with Krida Rasik Education Society Institute of Management and Research recently organised a one-day seminar on Commerce and Management. The objectives of the seminar were to (1) create an opportunity and better environment for the upliftment of academic status of commerce and management education among the students and teachers; (2) emphasise the importance of commerce education, both in quantitative and qualitative terms; (3) examine the possibilities of integrating commerce education with curriculum; (4) consider commerce education as a tool of Management Science for an all round development of the nation; (5) identify ways and means to overcoming problems of commerce education.

In his inaugural address Ad. Sitaram Baheti, President and Director, Krida Rasik Education Society Institute of Management and Research, Jalgaon referred to the key issues to educate people to reach their fullest potential in living a good life. Commerce and management education must concentrate on what we can 'be' with commerce education and not on what we can 'do' with such type of education in commerce stream, he said.

Principal (Dr.) F.C. Mahajan of Uttar Maharashtra College of Commerce, Jalgaon in his keynote address stressed the importance of commerce education and highlighted the need to evolve a consensus on our course objective, course content, teaching method, faculty improvement and research programmes, extension works, etc.

The papers presented and discussed at the seminar included (1) Some problems of commerce education; (2) Business and its environment; (3) Farm management in Indian conditions; and (4) the need for human research management in India.

After detailed discussion the following recommendations were made : (1) Commerce education be made socially relevant to cater to the needs of changing society; (2) Emphasis should be laid on practical training at undergraduate level and theoritical bias at postgraduate level; (3) Interacting process should be evolved to have constant liaison between education and industry; and (4) Specialization through multi-department faculty.

Over hundred twenty participants including Professors, Directors of Institutes of Management Research/Readers from other universities and colleges attended the seminar.

Courses in Administrative Analysis and Improvement

The Centre for Work Study in Educational Administration of the Panjab University proposes to organise a 7-week Basic Course in Administrative Analysis and Improvement (Work Study/Management Services) from 6.1.1993 to 23.2.1993 for officers and officials of various universities and educational institutions in India. The objectives of the course are to familiarise the participants with the concept and techniques of O & M/Work Study; application of various techniques such as organisation analysis, method study and work measurement; conduct of project studies for three weeks after four week classroom instructions in administrative problems with emphasis on data collection, analysis and presentation.

The Centre will also organise a 13-week Advanced Course in Administrative Analysis and Improvement (Work Study/Management Services) w.e.f. 6.1.1993 to 6.4.1993 for officers and officials of various universities and educational institutions in India. The objectives of the course are to familiarise the participants with modern management practices; the techniques of organisational analysis, method study and work measurement; the concepts of system analysis, MIS, network analysis, job enlargement, job enrichment, behavioral aspects in motivation, communication, electronic data processing etc; methodoloy for carrying out studies of administrative problems with a view to suggest required staffing and simplification of work procedures.

Further details may he had from Prof Shital Parkash, Hony. Director, Centre for Work Study in Educational Administration, Panjab University, Chandigarh-160014.

News from Agricultural Universities

New Zonal Research Stations in the Offing

A meeting of the 6th Agroclimatic Zone of Indian Council of Agricultural Research was recently held at Chaudhary Charan Singh Haryana Agricultural University. It was decided at the meeting that in order to provide research support to the extension services and also to establish a better rapport between the two, all Zonal Research Stations of State Agricultural Universities of Haryana, Rajasthan and Gujarat would be strengthened suitably. Wherever necessary, new Zonal Research Stations would be established.

The meeting also called for quality improvement of the status of extension personnel for a long term human resource development. In order to strengthen the present linkages between the state department of Agriculture and researchers, coordination committees at the national, state and zonal levels would be formed. It was felt that although agricultural research and extension services have been considerably strengthened in the country during the last $1\frac{1}{2}$ decade, yet it has become imperative that these must be reoriented afresh at the grass root level.

Out of the total 500 research stations that India has, approximately 300 research stations are under state Agricultural Universities and the remaining 200 under ICAR. The participants reviewed the progress achieved so far and presented status paper.

Besides one hundred participants from Haryana, Rajasthan, Gujarat and Union Territories of Dadra and Nagar Haveli, Daman and Diu, the meeting was attended by Sh. Harpal Singh, Agricultural Minister, Haryana, Sh. Shankar Thakur, Agricultural Minister, Gujarat, Rao Dharam Pal Singh, State Minister for Animal Husbandry, Haryana, Dr. V.L. Chopra, Director General, Indian Council of Agricultural Research, Vice-Chancellors of State Agricultural Universities and several Deputy Director Generals of ICAR.

News from UGC

Countrywide Classroom Programme

Between 9th November to 14th November, 1992 the following schedule of telecast on higher education through INSAT-1D under the auspices of the University Grants Commission will be observed. The programme is presented in two sets of one hour duration each every day from 1.00 p.m. to 2.00 p.m. and 4.00 p.m. to 5.00 p.m. The programme is available on the TV Network throughout the country.

Ist Transmission

1.00 p.m. to 2.00 p.m.

9.11.92

"Fractal Structure of a Diffusion Front".

"Basic of Dairy Farming."

"Towards a Bright Future: The Economy-II."

10.11.92

No Telecast

11.11.92

"SPOT: Picture a la carte."

"Exoskeleton in Amniotes."

"Bishnupur Temples."

12.11.92

"Buried Treasure: Platinum, the Element."

"19th Century Russian Literature: Lev Tolstoy."

13.11.92

"Enigma of Development."

"Desert Wildlife – The Graceful Blackbuck."

"Child Psychiatry - I: Know Your Child."

14.11.92

"Nrityaganga -IV: Expression of Emotions."

"Achieving the Best."

"Week Ahead."

IInd Transmission

4.00 p.m. to 5.00 p.m.

9.11.92

"Exotic Nuclei."

"Jojoba: A Future Plant -I."

"Superior Subordinate Syndrome."

10.11.92

No Telecast

11.11.92

"Biotechnology and its Applications."

"Keeping the Tracks Fit – II."

"Wind Energy."

12.11.92

"Functional Linguistics -III: Functions of Communication."

"Shake Table."

"Spotlights."

13.11.92

"Vedic Mathematics - X: Cubes and Cube Roots by Yavadunam Sutra."

"The Cosmic Quest."

"Paper Boats in Turbulent Streams"

14.11.92

"Guitar Playing Techniques -I."

"Jacques Monestier's Artifical Hand."

"Week Ahead."

News from Abroad

China's First Private University

China's first private university has just been opened in Shanghai. More than 1,500 people applied for 180 places in applied computer science, international business and account subjects which themselves reflect the changing times and which are badly needed in the thriving business city.

Tuition fees at the new university – an offshoot of a high-tech project involving the prestigious Peking and Qinghua Universities in Beijing and Shanghai's Jiaotong University – run at 4,000 yuan (about £400), nearly four times what many Chinese people earn in a year.

Lack of funds for higher education have led to new regulations in Beijing to allow students who are willing and able to pay fees of between 1,500 and 2,500 yuan a year to enter elite institutions with marks lower than state-supported students.

At least 10 percent of this year's intake to Beijing's 40 universities are paying their own way or are being supported by relatives.

Such privately-supported students come in the main from educated groups such as civil servants, teachers, doctors, scientists, etc. Their lives are in total contrast to those of the "lost generation" who never went to college because of the closure of institutions for five year during the Cultural Revolution.

Today's private students, many of whom enter special courses which allow them to learn about things such as foreign trade, finance, accounting and tourism, are told it will be easy for them to find jobs or go abroad to study further – the golden dream of Chinese youth.

As Chinese society becomes more market-oriented and competitive, education is increasingly being seen as the key to both economic development and personal advancement.

The government has been trying to teach Chinese people that wealth is not incompatible with socialism and, says Gao Shangquan, vice-minister of the state commission for the restructuring of society, a consensus is emerging over the "logical progression" to a market economy. Higher education is part of that development.

Jain Chair for Columbia Varsity

At the instance of the world renowned Jain muni, Acharya Sushil Kumarji Maharaj, Columbia University in New York is reported to have agreed to set up a Jain Chair from the academic year beginning in 1993. This means both Jain teachings and research into it will be a part of South Asian studies at the university.

An anthropologist, a historian and two art historians will also make presentations on Jainism during the seminars. Besides the setting up of a chair on Jainism, Acharya Sushil Kumarji Maharaj has also established a university of non-violence in New York.

It is a sister institution of the U.N. University of Peace in Costa Rica. Earlier, Acharya Sushil Kumarji had launched a world movement on non-violence for peace and environment during the Earth Summit at Rio de Janeiro.

Reforming New Zealand Higher Education

A radical overhaul of New Zealand qualifications is being planned, aimed at creating the world's most advanced modular system of higher education.

The new system, proposed by the New Zealand Qualification Authority (NZQA), is similar to that being introduced by many British institutions. It simplified the existing qualifications' structure by enabling a high level of credit transfer and acknowledgement of prior learning.

It will apply from secondary school upwards, and will include courses offered at all education and training institutions, including schools, polytechnics, private institutions and *marae* (centres of learning for young Maoris).

Courses will be calculated in terms of units of learning, to be used as building blocks assembled to attain levels of learning which will in turn be credited towards qualifications. The initial qualification will be the new school National Certificate.

In a paper to the NZQA, the Vice-Chancellors' Committee rejected the plans and said the unit approach would "fragment university qualifications, obscure their overall purpose and diminish their identity with a particular institution".

Chairman Sir Robin Irvine described the plan as too rigid in its current form but stressed that universities wanted to cooperate. A joint vice-chancellors and qualification authority consultative group has been set up to work through the issues, and lecturers are helping to assess proposals for degree courses.

Blood Test for Cancer Detection

Researchers at Melbourne's Monash University have developed a blood test which greatly increases the chances of detecting cancers of the digestive tract. Such cancers are the most common worldwide.

Present blood testing methods can detect only 30 per cent of large bowel cancer and even fewer stomach cancers. The new test boosts diagnosis by detecting 40 percent of such cancers. When used with the present test, the detection rate rises to more than 50 percent.

Professor Tony Linnane, of the university's Centre for Molecular Biology and Medicine, said that while the Japanese pharmaceutical firm Eisai had shown an interest in it, Monash was looking for backers in Australia and overseas to develop the test further and to market it commercially.

POST GRADUATE INSTITUTE OF MEDICAL EDUCATION AND RESEARCH, CHANDIGARH. 160012

ADMISSION NOTICE NO. 30/93

CLOSING DATE FOR THE RECEIPT OF APPLICATIONS IS 30TH NOVEMBER, 1992

Applications, on the prescribed form are invited for the following postdoctoral, postgraduate courses and Ph.D. programme for the academic session starting from Ist January, 1993.

I. SENIOR RESIDENTS - 15 for DM/M.Ch. Courses :

For DM Courses		For M.Ch. Courses	
1. Cardiology	-1	1. Cardiovascular & Thoracic Surgery	-2
2. Cl. Pharmacology	-2	2. Neurosurgery	-2
3. Endocrinology	-2	3. Plastic Surgery	-2
4. Gastroenterology	-1	4. Urology	-2
5. Nephrology	-1		

a) A few (1-2) seats may be available for sponsored/deputed candidates for all the courses mentioned above except DM (Nephrology). 1-2 seats for deputed/sponsored candidates may also be available for DM(Neurology) course.

b) Upper age limit on 1.1.93 :- Not more than 35 years for general candidates and 40 years for candidates belonging to Sch. Castes/Tribes and ex-servicemen and Commissioned Officers including E.C.O./S.S.C.O.'s who have rendered atleast 5 years military service and are released on satisfactory completion of assignment. No upper age restriction for deputed/sponsored candidates.

c) Candidates due to appear in MD/MS examinations during Nov./Dec., 1992 can also apply. They will be admitted to the entrance test only, if they furnish the result of their examination from the University concerned atleast two days before entrance test.

II. **M.Sc. (Pharmacology) : 3 Seats**
One seat reserved for candidates belonging to Sch. Castes/Tribes.

III. **Ph. D. PROGRAMME**
Vacancies exist in the following departments :-
Anaesthesia, Biochemistry, Biophysics, Cardiology, Expt. Medicine, Endocrinology, Immunopathology, Medical Microbiology, Obst. & Gynae., Parasitology, Paediatrics, Pharmacology, Psychiatry and Radiotherapy.

GENERAL INFORMATION

1. For all courses, where MBBS or MD/MS is an eligibility requirement, candidates who have made more than one attempt (i.e. have more than one failure, compartment or re-appear) during their MBBS courses are not eligible. However, those belonging to Sch. Castes/Tribes with upto two attempts in their MBBS career will be eligible.
2. Those applying for the reserved seats must append with their applications, a certificate from the District Magistrate concerned in support of their claim. No other certificate will be entertained.
3. The number of seats wherever indicated is provisional and is subject to change without prior notice.
4. The application must be accompanied with non refundable fee of Rs. 100/- in the form of postal order/bank draft drawn in favour of the Director for each of the courses mentioned above. A candidate applying for more than one subject/course is required to submit separate application, complete in all respects, for each subject/course.
5. Application form and detailed information are available from the office of the undersigned either personally on payment of Rs. 20/- at the counter from 10.30 A.M. to 11.30 A.M. on all working days and from 2.30 P.M. to 3.30 P.M. on all working days except Saturdays or by post for which the request be accompanied with a self addressed envelope size (23x10 cms) bearing postage stamps of Rs. 4.50 and crossed postal order for Rs. 20/- drawn in favour of the Director. Money orders are not accepted.

O.P. Sharda
Registrar

CALENDAR OF EVENTS

Proposed Date of the Event	Title	Objective	Name of the Organising Department	Name of the Organising Secretary/ Officer to be Contacted
November 9-13, 1992	16th World Conference on Distance Education for the Twenty-First Century	To give a view of the aspects of development in Distance Education in Twenty-First Century	International Council for Distance Education, in cooperation with Sukhothai Thammathirat Open University (STOU), Thailand	Mr. Bruce Scriven, Program Chair -16th World Conference of ICDE, Queensland University of Technology, Locked Bag No.2, Red Hill Queensland 4059, Australia
November 21-24, 1992	XXX VIII All India Library Conference of ILA	Theme: Library of Information Technology: In Pursuit of Excellence	Indian Library Association	Dr. M.Mahapatra Prof. & Head, Deptt. of Library & Infomation Science, Utkal University, Bhubaneswar -751004
November 25-30, 1992	IAEWP 6th World Congress	The Congress will deal with (1) Social Welfare, (2) Health Care, and (3) Educational Needs	International Association of Educators for World Peace (IAEWP) in co-operation with Social Action Movement, Malta	Dr. Suryanath Prasad, International Co-ordinator, IAEWP 6th World Congress & World President, IAEWP, Janta College of Education, P.O.Box 113, Chandrapur- 442401 Maharashtra, India
December 28-30, 1992	All India English Teachers Conference	Theme: Modern Trends in English Literature and New Literatures in English	Indian Association of English Studies	Prof. K.Venkata Reddy, Professor of English, Sri Krishnadevaraya University, Anantapur-515003
December 14-16, 1993	1993 Annual Conference of the Society for Research into Higher Education	Theme: Governments and the Higher Education Curriculum: Evolving Partnerships	Society for Research into Higher Education, London	Prof. Tony Becher, EDB, University of Sussex Falmer, Brighton BN.19RG

RESEARCH IN PROGRESS

A list of Research Scholars registered for Doctoral Degrees in Indian Universities

BIOLOGICAL SCIENCES

Anthropology

1. Bose, Shikha. **Environmental toxicity of human breast tissue** Delhi. Dr H K Kulkarni,Department of Anthropology, University of Delhi, Delhi and Dr A K Mandal, Assoc Prof, Department of Pathology, Maulana Azad Medical College, New Delhi .

2.Choudhary, Himanshu.**Estimation of stature from foot measurements,** Delhi. Dr A K Kapoor, Department of Anthropology, University of Delhi, Delhi.

3.Gogai, Juri. **Dermatoglyphics of patients afflicted with muscular dystrophy**, Delhi. Dr H K Kumbnani, Department of Anthropology, University of Delhi, Delhi.

4.Mugdh, Mrinal.**Ecology and culture**. Delhi.Dr R S Mann, Department of Anthropology, University of Delhi, Delhi.

Biology

1.Ranvir Singh .**Mechanism of translocation in protein synthesis,** BHU. Prof M Chakravorty, Molecular Biology Unit, Institute of Medical Sciences,Banaras Hindu University, Varanasi.

Biochemistry

1.Chaubey, Kumud .**Effect of some uraemic toxins and indigenous drugs on carbonic anhydrase enzyme activity in venal cell membrane**.BHU. Dr H P Pandey, Department of Biochemistry, Banaras Hindu University, Varanasi

2.Gajjar, Leena A .**Biological actions in the presence of surfactants assemblies**. BHU. Dr R S Dubey, Department of Biochemistry, Banaras Hindu University, Varanasi

3.Girish Kumar, Ritambhara. **Stress metabolism in rice**. BHU . Dr R S Dubey, Department of Biochemistry, Banaras Hindu University, Varanasi.

4.Khalloue, Naser. **Identification and characterization of malarial alantigens** Dr D C Kaushal,Central Drug Research institute, Lucknow and Dr R S Dubey , Department of Biochemistry, Banaras Hindu University, Varanasi

5.Pandey, Rekha. **Biochemical studies of uraemic toxins-Phenol and inosital with special reference to its hydraulic permeability** BHU. Dr H P Pandey, Department of Biochemistry, Banaras Hindu University, Varanasi.

6.Rajesh Kumar.**A biochemical study on gastric secretory functions in cases of dyspepsia** . BHU. Dr H P Pandey, Director, Institute of Medical Sciences, Banaras Hindu University, Varanasi.

7.Shah, Kavita. **Heavy metal toxicity in rice**. BHU. Dr R S Dubey, Department of Biochemistry, Banaras Hindu University, Varanasi.

8.Singh, Ravindra Nath. **Biochemistry of filariasis**. BHU . Dr (Mrs) S Rathaur, Department of Biochemistry, Banaras Hindu University, Varanasi

Biotechnology

1.Das, Nilanjana. **Analytical application of enzymes**.BHU. Dr A M Kayastha and Prof O P Malhotra ,School of Biotechnology, Banaras Hindu University, Varanasi.

2.Maggon, Ruchi.**Micropropagation of certain tree species**. BHU Prof B D Singh, School of Biotechnology Banaras Hindu University, Varanasi.

3.Singh, Kusum Lata. **Plasmid and restriction enzyme in cyanobacteria**. BHU. Dr Ashok Kumar, School of Biotechnology, Banaras Hindu University, Varanasi.

3.Srivastava, Anju. **In-vitro activation of macrophages** . BHU. Prof Ajit Sodhi, School of Biotechnology ,Banaras Hindu University, Varanasi.

4.Srivastava, Kirti. **Selection of toxin resistant chickpea lines.** BHU. Prof B D Singh, School of Biotechnology, Banaras Hindu University, Varanasi.

Botany

1.Dewan, Anita . **In vitro morphogenesis in some fabaceous tree species**, Delhi. Prof S C Gupta, Department of Botany, University of Delhi, Delhi and Dr (Miss) Kanan Nanda, Daulat Ram College, Delhi.

2.Dubey, Anjali. **Physiological studies of diazotrophic cyanobacteria** .BHU .Prof D N Tiwari, Department of Botany, Banaras Hindu University, Varanasi

3.Gupta, Nisha. **Studies on the acetylcholine system in plants**.Delhi Dr Rajendra Gupta, Department of Botany, University of Delhi. Delhi

4.Kapoor,Ritu.**Microbial ecology and plant pathology** Delhi.Dr P D Sharma, Department of Botany, University of Delhi, Delhi.

5.Mittal, Deepika. **Microbial ecology and plant pathology** Delhi. Dr P D Sharma, Department of Botany, University of Delhi, Delhi

6.Mohanty, Aparajita.**Wide hybridisation in Brassica.** Delhi.Prof K R Shivanna, Department of Botany, University of Delhi, Delhi.

7.Pandey, Shashi. **Tissue culture in tropical plants**. BHU. Prof V S Jaiswal and Dr (Mrs) U Jaiswal, Department of Botany, Banaras Hindu University, Varanasi.

8.Pandey, Vidya Dhar . **Physiology and genetics of Anabaena 7120**. BHU. Prof D N Tiwari, Department of Botany, Banaras Hindu University, Varanasi.

9.Rai, Ramesh Kumar. **Effect of some industrial wastes on growth and biochemical composition of a few cyanobacteria** BHU. Dr (Mrs) M R Goyle, Department of Botany, Banaras Hindu University, Varanasi.

10.Ram, Brijmohan **Ecology of revegetation of coal-mine spoil** BHU. Prof J S Singh, Department of Botany, Banaras Hindu University, Varanasi.

11.Raman, Rathendra.**Role of phosphatases in gum plant productivity** .Delhi. Dr Ved Pal Singh, Department of Botany, University of Delhi, Delhi.

12.Shukla, Anjali. **Reproductive biology of infected and healthy plants** Delhi. Dr N N Bhandari, Department of Botany, University of Delhi, Delhi.

13.Singh, Anand Narayan. **Performances of selected plants on coal mine spoil** BHU. Prof J S Singh, Department of Botany, Banaras Hindu Univesity, Varanasi.

14Singh, Arun Kumar. **Physiology and biochemistry of some desiccation tolerant cyanobacteria under stress** BHU. Dr S N Tripathi, Department of Botany, Banaras Hindu University, Varanasi.

15.Singh, Ramesh Chandra **Hybridization and cytogenetical studies of Solanum** BHU. Dr B R Chaudhary, Department of Botany, Banaras Hindu University, Varanasi.

16.Singh, Suresh Kumar. **Algal periphyton in fresh water systems**BHU. Dr J P Gaur, Department of Botany, Banaras Hindu University, Varanasi.

17.Singh, Thoudam Santavir. **Influence of non-pathogenic microfungi on growth and yield of crop plants.** BHU. Prof Bharat Rai and Dr (Mrs) S Jariwala, Department of Botany, Banaras Hindu University, Varanasi.

18.Singh, Vinay Kumar. **Physiological ecology of mycrosystis aeruginosa Bloom** . BHU. Dr J P Gaur, Department of Botany, Banaras Hindu University, Varanasi.

Forensic Sciences

1.Basu, Sharvani **Pharmacological and histological studies of barbiturate drug abuse.**H S Gour. Dr H S Maheshwari and Dr Y N Sahai, Department of Criminology and Forensic Sciences, Dr Hari Singh Gour Vishwavidyalaya, Sagar.

2.Sharma, Ajay Kumar. **Analytical and toxicological study of some pyrethroids.**H S Gour. Dr J D Sharma, Department of Criminologyand Forensic Sciences, Dr Hari Singh Gour Vishwavidyalaya, Sagar.

Microbiology

1.Chavan, M D. **Immunological studies in hepatitis B infections** Shivaji. Dr A M Saoji, Department of Microbiology, Dr V M Medical College, Solapur.

Zoology

1.Abhilasha. **Hormonal regulation of gonadal functions** BHU. Dr A Krishna, Department of Zoology, Banaras Hindu University, Varanasi

2.Acharya, Biswa Ranjan.**Regulation of ursa cycle enzymes during antogenic development of freshwater air-breathing teleost,H. fossilis** BHU. Prof B K Ratha. Department of Zoology, Banaras Hindu University, Varanasi.

3.Alipreeta. **Physiology of bat pineal organ** BHU. Dr C Halder, Department of Zoology, Banaras Hindu University, Varanasi.

4.Bansal, Pankaj. **Cellular biology of ciliate protozoan** Delhi. Dr G R Sapra, Department of Zoology, University of Delhi, Delhi.

5.Bhattacharya, Sanjib .**Heterochromatin and evolutionary divergence in the Mus dunni complex : Cytogenetic and molecular aspects** BHU. Prof T Sharma, Department of Zoology, Banaras Hindu University, Varanasi.

6. De, Abhijit. **Studies on cytogenetics and systematics of certain Indian dipterans.**BHU. Prof J P Gupta, Department of Zoology, Banaras Hindu University, Varanasi.

7.Jain, Sudhir. **Taxonomic studies on thysanoptera** Delhi. Dr J S Bhatti, Department of Zoology, University of Delhi, Delhi.

8.Khanna, Taruna **Biochemical endocrinology** Delhi. Prof K Muralidhar, Department of Zoology, University of Delhi, Delhi.

9.Mathew, Salomy.**Studies on quantitative inheritance in Drosophila** BHU. Prof B N Singh, Department of Zoology, Banaras Hindu University, Varanasi.

10.Mehra, Upinder.**Taxonomic studies in thysanoptera** Delhi. Dr J S Bhatti, Department of Zoology, Univesity of Delhi, Delhi.

11.Paimpalil Thomas M .**Studies on ceratopogonids of Kerala (Ceratopogonidae : Diptera: Insecta)**,Kerala. Dr R S Prasad, Department of Zoology, University of Kerala, Kerala.

12.Sharma, Girdhar Gopal.**Molecular and cytogenetic studies in Indian pygmy field mice.** BHU. Prof T Sharma, Department of Zoology, Banaras Hindu University, Varanasi.

13.Singh,Garima . **Some aspects of endocrinology of reproduction with special reference to pineal gland** BHU. Prof T P Singh, Department of Zoology, Banaras Hindu University, Varanasi.

14.Valamparampil, Thomas T. **Hormonal control ofmetamorphosisat morphological and physiological levels in certain amphibians.** Kerala . Dr Oommen N Oommen, Department of Zoology, University of Kerala, Kerala.

Medical Sciences

1.Kalipindi, Naga Raju.**Allergic conditions of the eye and their management in ayurveda.**BHU. Dr K R Sharma, Department of Shalya Shalakya, Institute of Medical Science, Banaras Hindu University, Varanasi.

2.Kanikkanan N. **Transdermal delivery of model drugs by ionophoresis** BHU. Dr J Singh and Dr P Rama Rao,Department of Pharmaceutics, Institute of Technology, Banaras Hindu University, Varanasi.

3.Kulkarni, Kallo Anant. **Biochemical studies in psychiatric disorder** Shivaji. Dr S K Ahaley, Government Medical College, Miraj.

4 Rama Rao, M S. **Pattern of oral diseases in Varanasi** BHU. Prof B P Singh, Department of Dentistry and Prof (Mrs) P Kaur, Department of Preventive and Social Medicine,Banaras Hindu University, Varanasi.

5.Sharma, Mukta. **Chemical and biochemical standardization of ayurvedic bhasmas with special reference to liver function** BHU. Dr Y B Tripathi, Department of Medicinal Chemistry, Banaras Hindu University, Varanasi.

6.Singh, Sudhir.**Contributions of gastrointestinal tract microbial flora in the bio-transformations of various food colours and dietary contaminants** BHU. Prof G P Katiyar, Department of Paediatrics, Institute of Medical Science, Banaras Hindu University, Varanasi.

7.Tiwari, Pramil. **Opioid tolerance and dependence mechanisms** BHU. Dr Rama Rao, Department of Pharmaceutics, Institute of Technology, Banaras Hindu University, Varanasi.

8.Varma, Manthina Mohan. **Transdermal delivery of insulin by ionophoresis** BHU. Dr J Singh and Dr P Rama Rao, Department of Pharmaceutics ,Banaras Hindu University, Varanasi.

Current Documentation in Education

A list of select articles culled from periodicals received in AIU Library during September 1992

EDUCATIONAL PHILOSOPHY

Rao, K N. Vidyasagar: An ineffable teacher and educationist and indefatigable crusader. **Progressive Ednl Herald** 6(4), 1992, 55-8.

Vedantha Chary, K. Dualities inherent in educational theory. **Progressive Ednl Herald** 6(4), 1992, 8-10, 13.

EDUCATIONAL SOCIOLOGY

Joshi, P C. Indian society and the education of the disadvantaged: Some observations. **Progressive Ednl Herald** 6(4), 1992, 40-8.

Ryan, Mark B. Residential colleges: A legacy of living & learning together. **Change** 24(5), 1992, 26-35.

Tierney, William G. Building academic communities of defference: Gays, lesbians, and bisexuals on campus. **Change** 24(2), 1992, 40-6.

EDUCATIONAL PLANNING

Bhattacharya, Surjyansu. Education for 21st century. **Yojana** 36(16), 1992, 29

Ranga Rao, N V and Sudhakar Rao, K. Minimum levels of learning: A harbinger of quality in education. **Progressive Ednl Herald** 6(4), 1992, 18-20,24.

WOMEN'S STUDIES

Mathur, V S. Educating the "better half". **Progressive Ednl Herald** 6(4), 1992, 14-7.

Vijaya Lakshmi, B. Leisure time training for women. **Progressive Ednl Herald** 6(4), 1992, 25-9.

EDUCATIONAL ADMINISTRATION

Dietrich, Marek and Kurzydlowski, Krzysztof J. Cooperation between business and higher education in Poland: The Enterprise Development Center at Warsaw University of Technology. **Industry & Hr Edn** 6(3), 1992, 167-70.

Hamburg, Steven P and Ask, Susan I. Environmental ombudsman at the University of Kansas. **New Directions for Hr Edn** 20(1), 1992, 55-63.

Kelly, John. Establishing a university-industry programme: A conceptual framework. **Industry & Hr Edn** 6(3), 1992, 161-6.

Kobus, Jan A. Universities and the creation of spin-off companies: University of Twente and the TOP and TOS programmes. **Industry & Hr Edn** 6(3), 1992, 136-42.

Palmer, Parker J. Divided no more: A movement approach to edcational reform. **Change** 24(2), 1992, 10-7.

Pierce, Morris A. Campus energy management programs. **New Directions for Hr Edn** 20(1), 1992, 31-43.

Sathe, S P. Supreme Court on right to education. **Eco and Pol Weekly** 27(35), 1992, 1847-8.

Smith, Helen Lawton and Atkinson, Michael. Industry-academic links and local development: The case of Ottawa. **Industry & Hr Edn** 6(3), 1992, 151-60.

CURRICULUM

Chatterjee, Anjana. Entrepreneurship development programme and self employment. **Yojana** 36(16), 1992, 12-5.

Sharma, R D. Population education for out-of-school youth & adults. **Progress of Edn** 67(2), 1992, 31-5.

TEACHERS & TEACHING

Gandhi, K A. Microteaching approach for student-teachers. **Progress of Edn** 67(2), 1992, 39-41,38.

Kulkarni, V M. Teacher training programmes for quality education. **Progress of Edn** 67(2), 1992, 45-7.

Lichtenberg, James. New paradox of the college textbook. **Change** 24(5), 1992, 11-7.

Sadker, Myra and Sadker, David. Ensuring equitable participation in college classes. **New Directions for Teaching and Learning** 49, (Spring) 1992, 49-56.

Vimala Devi, P. Factors affecting the choice of the medium of instruction: Some implications for language teaching. **Progressive Edn Herald** 6(4), 1992, 49-54.

Winkler, Allan M. Faculty workload question. **Change** 24(4), 1992, 36-41.

EDUCATIONAL TECHNOLOGY

Dubey, Archana. Needed: An awareness about cybernetic feedback. **Progressive Ednl Herald** 6(4), 1992, 30-2.

ECONOMICS OF EDUCATION

Senteza Kajubi, W. Financing of higher education in Uganda. **Hr Edn** 23(4), 1992, 43-41.

Shanta Kumar, G. Student loans for higher education in Singapore: Some observations. **Hr Edn** 23(4), 1992, 405-24.

Shouxin, Li and Bray, Mark. Attempting a capitalist form of financing in a socialist system: Student loans in the People's Republic of China. **Hr Edn** 23(4), 1992, 375-87.

Tilak, Jandhyala B G. Student loans in financing higher education in India. **Hr Edn** 23(4), 1992, 389-404.

Winston, Gordon C. Hostility, maximization, & the public trust: Economics and higher education. **Change** 24(4), 1992, 20-7.

SCIENCE EDUCATION

Bruffee, Kenneth A. Science in a postmodern world. **Change** 24(5), 1992, 18-25.

Tobias, Sheila. Science education reform: What's wrong with the process? **Change** 24(3), 1992, 13-9.

ADULT EDUCATION

India. Education (Department of-). Total literacy campaign. **Progressive Ednl Herald** 6(4), 1992, 33-7, 39.

COMPARATIVE EDUCATION & COUNTRY STUDIES

Orivel, Francois. French-speaking universities in Sub-Saharan Africa: A critical impasse. **Prospects** 21(3), 1991, 343-50.

Sadlak, Jan. Development of higher education in Eastern and Central Europe in the aftermath of recent changes. **Prospects** 21(3), 1991, 401-12.

Schwartzman, Simon. Latin America: Higher education in a lost decade. **Prospects** 21(3), 1991, 363-73.

Troen, SIlan. Higher education in Israel: An historical perspective. **Hr Edn** 23(1), 1992, 45-63.

Windolf, Paul. Cycles of expansion in higher education 1870-1985: An international comparison. **Hr Edn** 23(1), 1992, 3-19.

Wulf, Christoph and Sting, Stefan. Education in the new Germany: Self-confrontation or intercultural learning? **Education** 45, 1992, 60-71.

CLASSIFIED ADVERTISEMENTS

HIMACHAL PRADESH UNIVERSITY

'Recruitment Branch'

Advertisement No. 3/92

Applications are invited (on prescribed form) for the following teaching/non-teaching posts so as to reach the **Assistant Registrar, Recruitment Branch, H.P. University, Shimla-171005,** alongwith a crossed Indian Postal Order of Rs. 20/- (Rs. 10/- for SC/ST) payable to the Finance Officer, HPU by **Novermber 27, 1992 :-**

I. PROFESSORS (Pay Scale : Rs. 4500-7300) in the following subjects of teaching Deptts :

Business Management-2 (One Plan post likely to continue), **Computer Science**-1 (Plan post likely to continue), **Political Science**-2.

II. READERS (Pay Scale : Rs. 3700-5700) in the following subjects of teaching Deptts :

Computer Science-1 (Plan post likely to continue), **Education**-1 (Spl. in Educational Psychology), **Mathematics**-1 (Plan post likely to continue), **Music**-1, **Physics**-2 (One in Experimental Physics), **Political Science**-1 (Leave vacancy for about six months), **Statistics**-1.

III. LECTURERS (Pay Scale : Rs. 2200-4000) in the following subjects of teaching Deptts :

Computer Science-1 (Plan post likely to continue), **Education**-1, **Mathematics**-1, **Physics**-1, **Political Science**-2 (One reserved for Scheduled Caste candidate), **Yoga**-1 (Leave vacancy for about 2 years), **Commerce**-1 (For Dte. of Correspondence Courses). **Lecturer**-1 (For Academic Staff College).

IV. LIBRARIAN-1 (Pay Scale : Rs. 4500-7300),

V PROGRAMMER-1 (Pay Scale : Rs. 2200-4000) - For HPU Computer Centre.

The qualifications and other conditions for the above mentioned posts will be made available with the application form.

Candidates alraday in serivce should send their applications through proper channel. An advance copy, however, may be sent direct.

Candidates called for interview will have to come to the place of the interview at their own expenses and bring with them their original research papers, degrees, and certificates etc. for verifications.

The University reserves the right to negotiate with suitabe person or persons, if necessary, who may not have applied formally.

The University also reserves the right to fill up or not to fill up the post/s or to call only suitabe candidates for interview. The number of posts likely to be filled may vary.

Appliction form alongwith detailed qualifications and other conditions can be obtained from the **Assistant Registrar, Recruitment Brach, H.P. University, Shimla- 171005,** personally on payment of Rs. 5/- or by making a written request to him accompanied by self-addressed envelope of 23 x 10 cms. with postage stamps affixed worth Rs. 2/- and a postal order of Rs. 5/- drawn in favour of Finance Officer, HPU.

NOTE : i) Applications received on plain paper, applications not in conformity with the requirements as specified in the application form and applications received after the last date will not be entertained and no correspondence will be entertained in this regard.

ii) A person applying for more than one post should send a separate application for each post.

iii) Persons who have applied earlier in response to Advt. No. 3/91, dated August 16, 1991 for the posts of Readers in Education, Music, Statistics, Lecturers in Education and Academic Staff College need not to apply again. However, they may send additional informations, if any.

Subhash Ahluwalia
REGISTRAR

MEERUT UNIVERSITY MEERUT

Applications are invited for the post of a Lecturer in Statistics (temporary-upto Feby. 28, 1993 – likely to continue) in the grade of Rs. 2200-75-2800-100-4000. The application on prescribed form should reach the Registrar, Meerut University, Meerut-250005 latest by **Nov. 21,1992.**

MINIMUM QUALIFICATIONS :

(i) Consistently good academic record with atleast 55% marks or its equivalent grade in master's degree, or an equivalent degree of a foreign University in the relevant subject.

NOTE : A candidate having obtained either an average of 55% marks in Bachelor degree and second class in Intermediate examination OR 50% marks in each of the two examinations separately, is said to have consistently good Academic Record.

(ii) Only those candidates who, besides fulfilling the minimum academic qualifications prescribed for the post of lecturer, have qualified in a comprehensive test, if any, to be conducted according to the scheme of the University Grants Commission, will be eligible for appointent as lecturer.

Provided that a candidate :-

(a) who has passed U.G.C., or C.S.I.R. or JRF examination,

(b) who has already been awarded Ph.D. or M.Phil. Degree, or

(c) who will be awarded M.Phil. degree upto December, 1990 or Ph. D. degree upto December, 1992.

shall not be required to qualify in such a comprehensive test.

Prescribed application form can be obtained by sending a request to the Asstt. Registrar (Accounts), Meerut University, Meerut- 250005 alongwith a self addressed envelope of size 23 x 10 cms. and stamped worth Rs. 3/- accompanied by a Bank Draft of Rs. 20/- in favour of the Finance Officer, Meerut University, Meerut or by Cash Payment of Rs. 20/- at the Cash Counter of the University. IPOs or MOs are not acceptable. While requesting for application form please mention "Application for teaching post" on the envelope.

Har Prakash
REGISTRAR

IGNOU

Advt. NO. 7/Rectt/92

Applications are invited from INDIAN citizens possessing the requisite qualifications and experience for filling up the following posts in the pay scale shown against each plus allowances as admissible under the University rules.

1. JOINT DIRCETORS (REGIONAL SERVICES DIVISION)

PAY SCALE : 4500-150-5700-200-6300

QUALIFICATIONS & EXPERIENCE :

a) A Ph.D degree with a second class Master's degree in any discipline.

b) At least ten years experience in teaching and/or reserch or professional experience at a senior (supervisory) level in Educational Planning and Management or formulation and implementation of educational development programmes.

c) Those who have at least 5 years experience in the Distance Education in i) Organisation, monitoring and evaluation of student counselling services and orientation programmes for academic counsellors and/or ii) Course development and preparation will be given preference.

AGE LIMIT : 53 Years

2. DEPUTY DIRECTOR (PROJECT CONTROL)

PAY SCALE : 3700-125-4950-150-5700

QUALIFICATIONS & EXPERIENCE :

(A) ESSENTIAL :

(a) M.E. Degree in Computer Sciences with good academic record and with emphasis on System Analysis and design.

OR

(b) M.C.A. with good academic record

OR

(c) B.E in computer sciences and M.B.A. with good academic record.

AND

At least 5 years professional experience in case of (a) and **(b) and 5 years experience in case of** (c) in software development and applications, in information processing, administration, Finance or related areas.

(B) DESIRABLE :

Ph.D in relevant field.

AGE LIMIT : 50 Years

3. REGIONAL DIRECTORS/DEPUTY DIRECTORS (REGIONAL SERVICES DIVISION)

PAY SCALE : 3700-125-4950-150-5700

QUALIFICATIONS & EXPERIENCE :

a) Good academic record with a doctoral degree or equivalent published work. Candidates from outside the university systems shall in addition possess at least 55% marks or an equivalent grade at the Master's Degree level.

b) Eight years experience of teaching, insturction material preparation and/or research including upto 3 years for research degree and has made some mark in the areas of scholarship as evidenced by quality of publications, contribution to educational innovation, design of new courses and curricula.

OR

a) Master's degree with 55% marks and M.Phil in Arts, Commerce, Science etc. or Master's degree in Engineering/Management.

b) Eight years' experience at the level of Lecturer or an equivalent grade of which at least 5 years should be in the distance education system involving (a) course development and preparation and/or (b) organisation, monitoring and evaluation of student counselling services and orientation programmes for academic counsellors.

c) Preference will be given to those who have experience in the delivery of student services in the field.

AGE LIMIT : 50 Years

4. DEPUTY DIRCTOR (PLANNING)

PAY SCALE ; 3700-125-4950-150-5700

QUALIFICATIONS & EXPERIENCE :

a) A Ph.D degree preferabley with a second class Master's degree in Economics, Statistics, Management or Eductional Planning.

b) At least five years professional experience at a supervisory level in such areas like educational planning and management, formulation and implementation of educational development programmes, teaching and research.

c) The requirement of Ph. D may be waived in the case of candidates who are otherwise suitable from the point of view of the requirement of the position.

AGE LIMIT : 50 Years

5. DEPUTY DIRECTORS

PAY SCALE : 3700-125-4950-150-5700

QUALIFICATIONS & EXPERIENCE :

ESSENTIAL :

(1) Post Graduate degree from a recognised University with at least 55% marks or tis equivalent grade.

OR

i) A Bachelor's degree from a recognised University with at least 2nd class and ii) pass at final examination of Institute of Chartered Accountants/Cost and Works Accountants/Company Srcretary/M.B.A. or its equivalent qualification or SAS examination conducted by comptroller and Auditor General of India or similar examination conducted by Departmental Accounting organisations of Govt. of India.

(2) Eight years experience as Lecturer in College or a university with experience in educational administration

OR

Comparable experience in research establishment and other institutions of higher education.

OR

Eight years Administrative Experience as Assistant Registrar or in a post carrying a scale of pay not less than Rs. 2200-4000.

DESIRABLE :

Experience in areas such as purchase and stores/recruitment/establishment matters/Finance & Accounts/ governance of Universities/registration (admission)/ examination (evaluation)/Public Relations/ general administration of University in Central/ State Govt./Central/State University/central autonomous bodies/ public sector undertakings.

AGE LIMIT : 50 Years

6. RESEARCH OFFICER (PLANNING)

PAY SCALE : 2200-75-2800-100-4000

QUALIFICATIONS & EXPERIENCE :

(A) ESSENTIAL :

(a) A Second Class Master's Degree with at least 55% marks in Economics, Statistics, Commerce or Management.

(b) At least two years experience in Educational Planning and Administration, Survey and Field Research, Collection, Compilation and Analysis of Data etc.

AGE LIMIT : 40 Years

7. PRODUCERS

PAY SCALE : 2200-75-2800-100-4000

QUALIFICATIONS & EXPERIENCE :

(A) ESSENTIAL :

(a) Master's Degree from a recognised University preferably in Mass Communication/Instructional technology/Distance Education/Journalism.

(b) At least five years experience in the field of Planning and production of Radio/ Television programme.

(B) DESIRABLE :

(a) Practiacal experience in production of Educational Radio/Television programme.

(b) Ability to handle a variety of Subjects and formats for Production of radio and Television Programme including plays, feature, documentary, etc.

AGE LIMIT : 35 Years

8. PROGRAMME OFFICER

PAY SCALE : 2200-75-2800-100-4000

QUALIFICATIONS & EXPERIENCE :

(A) ESSENTIAL :

(a) First or Second Class Master's Degree from a recognised University.

(b) At least five years experience in Planning and Production of Television or Radio programme.

(B) DESIRABLE :

(a) Practical experience in production of Educational Radio/Televsion programme.

(b) Ability to handle a variety of Subjects and formats for Production of Radio and Television Programme.

(c) Training in educational media production in a reputed institution or abroad.

(d) Experience of working in an Educational Media Production Center.

AGE LIMIT : 40 Years

9. ASSISTANT REGISTRARS

PAY SCALE : 2200-75-2800-100-4000

QUALIFICATIONS & EXPERIENCE :

(A) ESSENTIAL :

(a) A Post Graduate degree from a recognised University with at least 55% marks or its equivalent grade.

OR

(i) A Bachelor's degree from a recognised University with at least 2nd class and (ii) pass at final examination of Institute of Chartered Accountants/Cost and Works Accountants/Company Secretary/M.B.A. or its equivalent qualifications or SAS examination conducted by Comptroller and Auditor General of India or similar examination conducted by Departmental Accounting organisations of Govt. of India.

(b) 5 years administrative experience.

AGE LIMIT : 40 Years

GENERAL CONDITIONS

i. The University reserves the right to :

a. relax any of the requirements with reference to age, qualifications and experience.

b. consider names of suitable candidate who may have not applied, on the recommendation of the Selection Committee.

c. post the selected candiates either in the headquarters at Delhi or at any of its Regional Centres located in different parts of the country.

d. prepare panel of selected candidates for filling in vacancies of any category that may arise in the next one year.

e. not to fill up any of the vacancies advertised.

ii. Since applications received may be short listed, merely possessing the prescribed qualifications and the requisite experiene would not entitle a person to be called for an interview.

iii. No interim queries or correspondence regarding issue ofcall letters for interview or selection of candidates for a post will be entertained at any stage.

iv. The University follows the Govt. of India rules and procedures in regard to the reservation for Scheduled Cast and Scheduled Tribe candidates in recruitment. The reservation will be followed in respect of the above posts where applicable.

v. The age limit prescribed, is the age limit applicable to general candidates as on 1st Sept. 1992. Relaxation in age applicable to SC/ST candidates will be as per Govt. of India rules.

vi. Outstation candiates called for interview will be paid single second class railway/bus fare to and fro the place of interview by the shortest route from their place of residence on production of rail/bus tickets or photo caopy thereof.

vii. The selected candidates may be liable to be transferred to any of the University's office in the Country.

viii. Canvassing in any form by or on behalf of the candidates will be a disqualification.

HOW TO APPLY

Application forms can be obtained from the **Recruitment Cell, Block- 4, Room No. 18, IGNOU Campus, Maidan Garhi, New Delhi-110068** in person or on a written request by post which must be recieved in the University Office **ONE WEEK** before the LAST DATE. All such requests should be accompanied by a SELF ADDRESSED ENVELOPE (SIZE 13 Cms. x 28 Cms) bearing postage stamps worth Rs. 2/-. REQUESTS FOR APPLICATION FORMS WHICH

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Establishment Branch

Advertisement No. 5/92

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	Essential qualification and Specialization required.
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EDUCATIONAL QUALIFICATIONS

For the Post of Reader

(A) Good academic record with a doctoral degree or equivalent published work. Evidence of being actively engaged in (i) Research(ii) Innovation in Teaching Materials. (B) At least five years experience as Lecturer or in equivalent position.

For the Post of Lecturer

(A) A doctorate degree or research work of an equally high standard.

(B) Consistently good academic record with 1st. class or high 2nd class (in the seven point scale) Master degree in a relevant subject from an Indian University or an equivalent degree from a foreign University having regard to the need for developing interdisciplinary programmes, the degree in (A) and (B) above may be in relevant subject. Provided that if the Selection Committee is of the view that the research work of a candidate as evident either from his thesis or from his published work is of very high standard, it may relex any of the qualifications prescribed in (B) above for the post of Lecturer.

Provided further that if a candidate having a doctorate degree or equivalent research work is not available or is not considered suitable, a person possessing a consistently good academic record (weightage being given to M.Phil or equivalent degree or research work of quality) may be appointed provided he has done research work for atleast two years or has practical experience in a research Laboratory/Organisation on the condition that he will have to obtain a Doctoral degree or give evidence of research work of equivalent high standard within eight years of his appointment as Lecturer failing which he will not be able to earn future increment until he fulfils these requirements.

Provided further that if a candidate has first class career (60% or above marks) all through from Matriculation upto the Master degree level, such a candidate can be duly considered by the Selection Committee for appointment as Lecturer by relaxing the qualifications for research experience degree.

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AUTHOR :

J.C. Aggarwal is former Dy. Director of Education and Executive Director of Delhi Bureau of Text Books, Delhi Admn., Delhi.

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OR

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Waltair
Dt. 18-10-1992

Prof. V. ABRAHAM
DIRECTOR

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University News

MONDAY, NOVEMBER 9, 1992

Rs. 5.00

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CONVOCATION
BHAVNAGAR
DATE. 29. 3. 92

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Opinions expressed in the articles are those of the contributors and do not necessarily reflect the policies of the Association.

Editor :
SUTINDER SINGH

COLLEGE MAGAZINES

Krishan Gopal*

Almost every college brings out its own magazine every year. The importance of a college magazine cannot be underestimated. It reflects the spirit of the institution and at the same time provides a forum for the creative abilities of young scholars and promising writers. It need not be emphasized that even the most prominent writers and poets have made their small beginning from college magazines. A college magazine also highlights the problems of the student community and indirectly appeals for their redress. At the same time, it chronicles and highlights the important events and activities in which the students of the college have earned laurels. In a way, each college magazine keeps enclosed in its eternal leaves the spirit of the college, the memories of the staff and students, their natures, temperaments and abilities, their characters and achievements, their beaming faces, ideas and ideologies, and the blessed moments of hearts that knew no burden of life, and preserves them for the future generation. Turn over the pages of your college magazine some twenty or thirty years hence for a sentimental backward glance over travelled roads, and you will understand.

Unfortunately, today bringing out a college magazine has become more or less a ritual which is performed without much attention. A cursory look at any college magazine will reveal that it carries the same old stereotyped stuff – one article on love in which it is defined as "lake of sorrow, ocean of tears, valley of unconsciousness, and end of life", one article on "my sweetheart" who finally turns out to be a cup of fuming tea, one on the chemical formula of a modern girl, one on the ways of modern students, one on "three things" to be remembered in life, or one on an interview where the chairman says "rejected" while the candidate speaking antonyms says, "selected". By contributing such articles, the students provide a set pattern to all college magazines. In fact, the whole stuff is so much cycled and recycled in one magazine after another that one is compelled to believe in the existence of the law of conservation of printed matter. A disgusted staff editor has deplored this tendency among the students in the following words :

"Editing an undergraduate college magazine is an unenviable task. You don't know which article has been written by whom. You question the authorship of a particular poem and the poet standing before you would look askance at you as if he is a Keats or young Tennyson. You helplessly shake your head and assure the young poet that his 'original' poem would be included in the magazine. Working at your desk, you see a pile of articles and poems which have changed so many hands and magazines that we can now safely call them anonymous, as not even a research scholar will be able to trace the original authorship. And so almost invariably, the magazine becomes a bunch of plagiarized writings, the safe side being that no author can actually lay claim to their 'original' authorship and challenge the ingenuity and skill of the local 'talent'".

If this be the state of affairs, how can it initiate students into the nuances of creativity ? To cap it all, the Editorial Board usually passes on the entire stuff as an *affaire de rien* with its seal to the printing press. The printing press with its matriculate composers makes a mess of the entire material with printer's devils monstrous enough to growl at the careful reader.

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If all these factors are taken into account, the entire effort seems to be an exercise in futility and a drain on our national resources – about six reams of paper wasted every year for every college. This leads us to the serious question of stopping the reckless printing of college magazines. Yet if all things foul bear the brow of grace, we can't expect grace not to look as grace. There are some writers who betray seeds of creativity and if developed further, they are likely to sprout into big trees. Should such promising buds be nipped ? At this juncture, one is forced to find out the ways and means of reform. It is my firm opinion that a good college magazine is an endangered species which needs special care for survival rather than an unceremonious extinction and doom.

Endangered Species

When we think of breathing new life into this practically endangered species, we must first understand what editing exactly is. It is an immense task which not only means a proper and thorough "selection" of contributions, but also a lot of blue-penciling, dropping or adding sentences, even paragraphs and stanzas and sometimes even rewriting the entire contribution anew. A good writing like a lamp needs oil to give flame and someone has to provide that necessary oil. That person has to be the editor. At the surface it looks like an easy job, but beneath the surface is involved a sea of effort which only those connected with the business can fathom. This effort is the force which initiates a student into creativity. I am tempted to reproduce by way of example extracted from a poem submitted by a student and its edited version:

Oh ! My mother, Oh ! my mother,
Forget me not, forget me not;
I can't speak to excess,
But can write overmuch;
You don't know what a son is,
But I know mother very well.
You are going away from me,
But perhaps it is the misfortune of mine.
(**unedited**)

O my Mother ! O my Mother !
Forget me not, forsake me not !
I try to speak, but words are shy,
So I do scribble my heart's history;
You know too well what a son is,
But I know mother a little better;
So when you go away from me,
I feel like a fish out of water.
(**edited**)

This leads us to the conclusion that a partial solution to the problem lies in having dedicated staff editors who can take up the job sincerely. The second question, however, as to how to ensure originality of contributions is also ticklish and needs attention. As a successful Editor-in-Chief of a college magazine for four consecutive years I have tried the following experiments/innovations to make the magazine more meaningful and original :

i) To invite articles directly from students after an address in the classrooms and remind them that plagiarism is a sin.

ii) To form a writers' club in the college and hold regular monthly meetings.

iii) To institute prizes for various special features e.g. cartoons, cover design, in lighter vein, first hand experiences, short stories, captions, etc.

iv) To draw up an inventory of interesting topics and themes and asking students to write only on these.

v) To organise on-the-spot essay writing and poetry writing competitions.

vi) To weed out the stereotyped contributions straightaway.

vii) To add a question box wherein students' questions are wittily answered.

viii) To adopt newspaper style format for coverage of college news in the news section.

ix) To arrange photographs in colleges so that it not only saves space but also adds to the magazine's get-up.

x) To devote personal attention to proof-reading.

Lastly, I must confess that editing a college magazine is a challenge. How nice it would be if the state Directors of Education organise state-level college magazine competitions every year. Govt. P.G. College, Dharmsala used to hold a national- level college magazine competition, but it appears that the practice has been stopped with the departure and elevation of its Principal, Dr. Atma Ram.

TO OUR READERS

Knowledgeable and perceptive as they are, our contributors must not necessarily be allowed to have the last word. It is for you, the readers, to join issues with them. Our columns are as much open to you as to our contributors. Your communications should, however, be brief and to the point.

Wit and Humour in University Teaching

Ramesh K. Srivastava*

Indians in general and the university teachers in particular are often serious in temperament and deficient in wit and humour. Probably it is the cumulative result of our ancient ideal of renunciation, our serious classics, our veneration of the ascetics and mendicants, and now the insatiable hunger for money as also the political fashion of indulging in circumlocutory and noncommittal talks. The result is that humour is often considered a thing most undesirable or at best left to be cultivated by buffoons, court-jesters, circus-jokers, movie comedians or adolescents and children. In general, India seems to be under perpetual puritan atmosphere where people have left the habit of enjoying life. Add to this the rising prices, unemployment, cheating, violence, threats to life and property, and a vast question mark on the future, and you have the people living in the dark age of tension. The absence of comic shows, funny serials and light movies makes the country look like deeply steeped in a perpetual doomsday atmosphere.

What is true of life in general is as well true of the colleges and universities. The craze for degrees has reduced these institutions of higher learning to dull and drab places. The little humour and fun seen in extra-curricular activities on campuses appears more or less canned or regulated. A set of unmotivated teachers teach a bunch of unmotivated students and the net result is that at the end of the academic year and examination, the latter shout with relief, "Oh God! Save us from our boring teachers!" The best illustration of this attitude comes when the college or university is closed for a day on the death of a national leader and the students dance in joy because the riddance of boring classes gives so much happiness that the sorrow over the death of a leader is completely diluted. The ideal of "Respect Your Teacher" appears like a piece of good old joke. A dull lecture on poetry or prose, let alone on physics or chemistry, has often been known to put students to sleep. To such teachers, mere transmission of certain facts and figures in a fixed period of 40 to 60 minutes is what is termed teaching. A typical language or literature teacher comes to the class, makes a roll call, takes out a text book, reads out a piece of prose or poetry line by line, and word by word, explains the meanings of difficult words and then goes to the next and the next line adinfinitum till someone reminds him that the period is over. Throughout the entire period, the students sit as gloomily in the class as if they were in a prolonged condolence meeting.

A few teachers at least sense that the students are getting bored and adopt certain methods to keep them physically awake even if they happen to be quite indecent and unacceptable. Such a teacher goes to a roadside bookshop, buys a cheap book of jokes, notes down a couple of them in the margin of the textbook or in the his notes, narrates them to provoke the class to laughter even if the jokes happen to be unconnected to the subject of teaching at all. A few others memorise romantic Urdu couplets, comic Hindi poems or witty dialogues from popular movies to titilate the students in the classrooms. The result is that on many occasions, no teaching is done because having tasted the interesting atmosphere, the students wish the short break from boredom to be extended to the entire period at the cost of classroom teaching work.

Humour is a god-given gift found among the people with the purity of heart and soul. In certain cases, it has been known to be cultivated, provided the person is free from feelings of jealousy, deception and hypocrisy. With persistent efforts, it can successfully by used to create a pleasant atmosphere in the class. By provoking a dull class to laughter, it enlivens the text, creates liveliness where there was dullness, and brings in a gust of fresh air to facilitate both teaching and understanding. A witty remark is quite elucidating. The tiring facts and figures retouched with wit and humour remain permanently embedded in the memory.

What kind of wit and humour is useful for university teaching and to what extent? Wit and humour are to teaching what salt and pepper are to food: they must be used only as much as add to the taste and not more. Since the teaching periods in Indian system of education are almost continuous and without any gap, it is desirable that some interest in the subject be created to avoid daily marathon boredom exercises. Hence the capability of the teacher lies in creating interest right in the beginning of the class, to let the students have a hearty laugh or two to wash off the residue of boredom left over from the preceding period. Of course, the jokes, witty remarks or even references to a newspaper report should be natural, offhand, spontaneous, rather than laboured and memorised. The key to good humour is spontaneity. One laughs when suddenly a flashing incongruity, an exaggerated thing, a contradiction, an oddity, a paradox or an ironical situation comes before the mental eye.

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While making a rollcall or settling down in the chair, a teacher may narrate an interesting anecdote, describe a humorous situation or give a few introductory remarks which may be topical, references to the recent newspaper reports or something current like a hockey or cricket match. These are mere launching pads to take the teacher and the class to wild flights of imagination which may result in uninhibited laughter. Here are a few examples :

i) A man used to be late for his office everyday because he often slept through alarm. On his request, a physician recommended him a pill which gave him sound sleep and he got up before the alarm. Reaching the office before time, he said, "Sir I am in the office before time." The employer replied, "It's all right. But where were you yesterday?"

ii) Keeping the popularity of cricket in mind, my friend married a woman cricketer. Now when he goes for lunch or dinner, she practices it by throwing each chapati as if it were a ball and the husband has to make runs it between each chapati. When she practices both batting and bowling in the house, her average daily score comes to : one mirror, two window panes, a china cup or plate, a glass tumbler, and for commentary, a barrage of abuses from the adversely-affected neighbours.

In the middle of the lecture, the need to humour the students arises again because after the serious work of twenty minutes, some refreshing diversion is needed. In Western countries like U.S.A. and Canada, the students feel free to smoke a cigarette, to stretch out their legs on the table, to ask questions or to pass comments. Since such things are not quite common in Indian universities and colleges, the one-sided lecturer becomes montonous and tends to put students to sleep. This is a critical point which most people easily ignore and the consequences are often embarrassing. One does not have to be a psychologist or an astrologer to find out that the students are getting bored. Their yawning mouths, watering eyes, shifting glances, drooping heads, and their changing postures tell eloquently that they are only physically glued down to their seats but not a word of lecture goes into their heads. A university professor was notoriously known for putting his students to sleep. He would loudly read out his learned lecture from his typed notes to the class in a monotonous, sing-song voice and after ten minutes a few students were invariably found to be dozing off in their seats. One day when the Professor paid a courtesy visit to his ailing student in the neighbourhood, he was requested by the patient's father : "I need your help, Professor. I have been trying to put my son to a short sleep but I failed. Now I need the assistance of your proven art to do so." In the classrooms of such boring teachers, all that is needed is the periodic use of a witty word, a humorous sentence, a delightful conversation to provoke laughter and to lighten the atmosphere. The best thing at such times is to indulge in a dialogue, to draw a question from students and then to convert it into something humorous. Here are some examples.

a) *Student* : "Mrs. Ramana is going to deliver a lecture."
Teacher : "When is the delivery?"

b) *Student* : "When are you going to take up Bacon and Lamb (English Essayists)?"
Teacher : "I don't know. I am vegetarian."

c) *Student* : "In the last period, we were having Frost (American Poet)."
Teacher : "No wonder it is so cold today."

d) *Student* : "What should be the length of an essay?"
Teacher : "It should at least be longer than its title."

It must, however, be remembered that these are not correct replies. After a witty or humorous reply has provoked the class to laughter, a correct reply must immediately be supplied to avoid misunderstanding and to satisfy the student's curiosity or else he might be discouraged from asking anything in the future. There are a thousand and one ways to make the classroom teaching interesting without compromising on its usefulness. These devices depend on the temperament as well as ingenuity of each teacher. However, there are a few devices which have been found to be quite effective in making the teaching work quite interesting and humorous. One way is to make use of a few comic or ironical definitions, puns and witty remarks used on the spur of the moment which have been found to be quite successful in removing the cobwebs of boredom. These definitions startle the students, tease the mind and provoke laughter. I give below a few definitions of common words taken from Ambroase Bierce's *The Devil's Dictionary.*

a) *Lecturer* : One with his hand in your pocket, his tongue in your ear and his faith in your patience.

b) *Ass* : A public singer with a good voice and no ear.

c) *Bore* : A person who talks when you wish him to listen.

d) *Coward* : One who in a perilous emergency thinks with his legs.

e) *Medicine* : A stone flung down the Himalaya maintain to kill a dog in Bombay.

Another way of providing humour is to bring to the class relevant episodes of great writers, scientists, statesmen on appropriate occasions. It is important that the anecdotes be relevant and narrated at the right occasion.

a) *Making peace* : When Henry David Thoreau was on his deathbed, his friend asked him, "Have you made peace with God?" Thoreau replied, "I never quarrelled with Him."

b) *Beauty and Intelligence* : A woman not very intelligent but exceedingly beautiful once approached George Bernard Shaw who was known to be intelligent but not handsome, saying, "Sir, you are the most intelligent man and I am the most beautiful woman. If we marry, our children will have your intelligence and my beauty." Shaw replied, "They could also have my beauty and your intelligence" and the woman had no answer to it.

c) *A Parliament of Liars* : Khushwant Singh known for his wit and outspokenness, once remarked : "Half of the Members of Parliament are liars." The members of Parliament protested and insisted that he either withdraw his remark or apologize. To make amends, he said, "Half of the MPs are *not* liars."

d) *Being late* : Charles Lamb, an English Essayist, reached his office late. His employer said, "Mr. Lamb, you are late today." Lamb replied, "Sir, I'll compensate by leaving the office early."

e) *A politician* : Sir Winston Churchill was once asked the qualifications of a politician. Without hesitation, he answered : "It is the ability to foretell what will happen tomorrow, next month, next year – and to explain afterward why it did not happen."

The use of paradox, irony or exaggeration has often been found to be humorous. Here are some examples :

a) The Principal is a wonderful administrator. He has completely demolished the institution so that he has no problems in administering it.

b) The examination paper was so good that it gave me no problem at all because I understood not a word of it.

c) P.G. Wodehouse dedicated one of his books to his wife and daughter like this : "without whose unfailing help and advice this could have been written in half the time."

d) Doctors are wonderful. Mine certainly put me on my feet. The bill was so large I had to sell the car.

e) History and Geography leave absolutely no burden on my mind because what I memorise in the night, I forget it the next morning.

In teaching language and literature, one can find several opportunities for wit and humour by modifying phrases and idioms, distorting quotations or by introducing minor variations in spellings and pronunciation :

a) *Modified phrase* (love at first sight)

Boy : "Why do you call it *love at second sight*?"
Girl : "I had not known he was rich when I first saw him."

b) *Misplaced comma* :

Advice to a slim person : "Don't eat fast."
Advice to a fat person : "Don't eat, fast."

c) *Metaphors* :

A man was *bent* on marriage, so a woman was ready *to straighten him* out by marrying him.

d) *Light meaning* :

Student : "When does a book become a classic?"
Teacher : "When people who haven't read it begin to say they have."

e) *Play on words*

Teacher : "Your grade is under water"
Student : "Underwater?"
Teacher : "Yes, it is below 'C' level."

f) *Uncomplimentary close* :

A lady who paid with heavy interest the last instalment of her car angrily wrote to the bank manager : "Dear Sir, this is the last payment. Sincerely, but no longer, yours."

The devices enumerated above are by no means exhaustive. An ingenious teacher can find a thousand methods and devices to make the classroom teaching interesting and effective, though in doing so a caution must be kept in mind that a sense of decorum is maintained and that such instances of wit, humour and jokes are not used which are unpalatable and bitter, or are related to one's caste, family, community or religion. A delightful lecture is a joy forever.

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Research at Manipur University 1980-91
Highlights of Ph.D. Researches

Ramansu Lahiri*

Introduction

Manipur, an evergreen oval shaped valley in the middle of parallel rows of hill-ranges rising from 700 to 2000 metres above the sea level, lies in the eastern most corner of India. The kaleidoscopic landscape, rich flora and fauna, exotic and indigenous orchids, most threatened species of animals, Brow antlered deer, indigenous and migratory birds, fertile valley, sparkling lakes, hilly streams and waterfalls, forests, Siroi Kasom hill ranges (a dreamland for botanists and naturalists), historical and archaeological importance, cultural, literary and historical wealth and finally the salubrious climate throughout the year – have won for this small state a very distinctive position in the country.

In the backdrop of such natural and other environmental factors as demonstrated in exhibit 1, the Manipur University (the university hereafter), was established by the Manipur University Act 1980 (Manipur Act 8 of 1980) on June 5, 1980. It is the only teaching-cum-affiliating university in the state and is located at Canchipur (with 333.33 sq. Km. of area) 8 km. away from the capital city Imphal. The University started with 10 departments, 55 teachers (Professor 01, Associate Prof. 14, Assistant Prof. 40) and 09 Ph.D. research scholars (Male 06, Female 03) besides with its normal students intake (PG) and working staff members.

With the time, the university has grown up steadily and now more than 150 university teachers, in not less than 20 departments under three schools have been engaged with PG teaching and supervising the research-work at the level of (i) PG (dissertations) (ii) M.Phil (dissertations) (iii) Ph.D. (theses) and (iv) individual/institutional projects (reports, publications and seminar presentations). In 1991, the university completed a long 12 years of time with research. Since a decade is over, a 'look back', therefore, seems to be not irrelevant in order to maintain the positions of pre-eminence in research in the university. The scope of this study is, however, restricted to Ph.D. theses only. The paper intends to highlight the topics chosen by the awarded scholars during the decade 1980-91 for the use of interested social-scientists and the fresh research scholars in assessing the areas of research covered so far and affording easy access to those works, if required.

The university has, so far, awarded 158 scholars (out of a total of 697 (717) enrolments) with 'Doctor of Philosophy' (Ph.D.) during 1980-91 (12 years) under its three schools. Awarding three scholars (Life Sc. – 2 and History – 1) in 1984 for the first time in its history, the university, infact, set the ball rolling.

Methodology

The topics of Ph.D. awardees are catagorized under three schools and, then, under individual departments as shown in exhibits. Each entry is prepared in two parts. The catchword/keyword from the title of the Ph.D. thesis (first part) followed by the short name of the author with the year of award within parenthesis (second part) is recorded and arranged as per core theme of the topic. The element of the name by which the author is supposed to be known widely in the academic community, is given emphasis for choosing the short name of the author. The author portion is cited in order to help the interested persons to identify and to have easy access to the particular work.

School of Science

The school consists of nine departments, namely, Life Sciences, Physics, Chemistry, Mathematics, Earth Sciences (estd. 1985), Anthropology (estd. 1985) Computer Application (estd. 1988), Statistics (estd. 1988), and Biochemistry (estd. 1989). A total number of 74 scholars in this school have been awarded Ph.D. during 1980-91; 50% (37) of which belong to its biggest department, the Life Sciences (i.e.Botany and Zoology streams) followed by Mathematics (14:19%), Chemistry (09:12%) Physics (05:6.8%), Earth Sciences and the Anthropology (04 each : 5.4% each). The Computer, Statistics and the Biochemistry are yet to open their accounts, because these departments have been set up very recently but the research works are under progress.

The elements which were given due importance in the works of the scholars of the department of Life Sciences (i.e. Botany and Zoology streams) are ants, mosquitoes and various insects, fishes, birds, deers, bamboos and various plants and fungi etc., ecosystem, ethnobotany or ethnobiology and so on and so forth. All the studies are made either on botanical or zoological aspects and very much related to land (valley & hills), fauna and flora, animals (land & water) of Manipur. Thus the department has justified its necessity in the state.

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The scholars of the Physics and the Chemistry departments have studied various aspects of 'solid state' and 'theoretical physics', 'organic and inorganic chemistry'. The exhibit shows that the three scholars have worked on T.L. studies while both organic and inorganic issues have been shared equally by the chemistry scholars.

Geography, Geophysics and meteorology are the three areas studied by the scholars of Earth Sciences during this decade. Bishenpur district is in the focus of one thesis for 'microlevel planning'. 'Transportation in Manipur' also has been studied in the background of earth science. Since the region is in seismic zone, the study on 'earthquake' is another important topic for research. In connection with increasing temperature in this part, the study on 'air temperature' seems to be a very relevant issue of research.

Coming to Mathematics, the exhibit shows that the topics of the studies mainly revolve around group theory, relativity, fluid mechanics and plasma. One exception is however, a study of population of Manipur (demography) in the mathematical background. Five scholars have worked on 'relativity', three each on 'group theory' and plasma and two on 'fluid machanics'.

'Tarao community', social condition of 'Meitei state' in 'early period', 'Culture of Manipur' and 'Muslim community in Manipur'are the central points of the study of the anthropology scholars during this decade. Thus both 'social' and 'physical' aspects of 'anthropology' have been touched.

School of Social Science

Under this school, there are six disciplines, viz History, Economics, Political Science, Commerce (estd. 1985), Education (estd. 1987) and Library & Information Science (estd. 1986). The school has produced 42 Ph.Ds. during 1980-91. The History is at the top (19:45.2%) followed by Economics (11:26.2%), Political Science (08:19%), Commerce and Library & Information Science (estd. 1986) (02 each; 4.8% each). The education (1987) department has not yet opened its account though 14 scholars are at work.

The popular area of study for the social science scholars has been the study of Manipur and its people. The exhibit highlights that alomost all the Ph.D. awardees have studied their favourite subject from different angles. The list includes – history of the state during different periods; its socio-religious and socio-political situation; education, arts, culture, economics and politics of the people (Meitei & Tribal communities); archeology; politics of state; economic history and socio-economic conditions of the state; agricultural & industrial economics; management of public sectors and public and university libraries and so on and so forth. The involvement of the tribal scholars to various tribal issues deserves warm appreciation. The agriculture, one of the main occupations of the people of Manipur, has been studied from diverse angles. Again, the topics selected by the Library & Information Science researchers have confirmed the necessity of searching for better methodology in order to control the processes of collection, storage, retrieval and dissemination of knowledge/information in this state in a very effective and efficient way.

School of Humanities

The departments of the Manipuri Language & Literature, Linguistics (estd. 1986), Philosophy (estd. 1987), English and Hindi are grouped under the School of Humanities. Out of a total of 42 Ph.D. awardees from the School (similar number as from School of Social Science), credit of producing 15 (35.8%) goes to the Hindi department followed by Manipuri Lang. & Litt. (12: 28.5%), English Lang. & Lit. (08: 13%), Linguistics (estd. 1986) (05:12%) and Philosophy (estd. 1987) (02:4.7%).

Besides the usual studies on fiction, poetry, stories under literature, the Hindi scholars have extended their horizon of studies commendably in searching relation between two or more languages, two or more cultures (like 'folk song') and two or more dialects. The scholars in English, on the other hand, have concentrated their studies in discovering something new from the writings of Joyce, Eliot, Lawrence, Brennan, Donne and Browning in the backdrop of the 20th century English Fiction, the Anglo-American poetry and drama and the Commonwealth Literature. The work on 'traditional Manipur theatre', is, however a little diversion in the process. The philosophical approach towards the two 'isms' (the Hinduism and the Vaishnavism) in the background of two societies (Indian and Manipuri) and two periods (modern and medieval), is perhaps the basic theme of two works produced by the Philosophy Department. The literary and linguistic world of Manipur has been well attended by the scholars from the Manipuri and the Linguistics departments during the last decade. While, on the one hand the ancient, medieval and modern period of Manipuri literature in different forms like fiction, poetry, drama, short stories, folk-songs are studied, on the other hand, the linguistic and dialectic parts of Meiteilon, Maram and Paite also are analysed with great care. In the study of literature, traditional game like 'Kang' and 'Polo' also are included which may attract the interested new generation to go further on their martial tradition by recording the origin and scope of many a traditional and indigenous sports which once became a part of Manipuri society.

Conclusion

The brief and non-critical observation made above over the Ph.D. works in Manipur University during 1980-91 (12 years) has confirmed that the awardees under the able guidance of their supervisors, have given judicious thought over the selection of the topics which is considered a most important part of research. Most of the topics are related to the land and lives of Manipur. Various issues associated with land (both valley and hills), its fauna and flora, (both land and water), environment, on the one hand and people (both plain and hills), its society, arts and culture, livelihood, language and literature, history, economics, politics, and its desire of information etc., on the other, have been given due emphasis. These are however, all domestic issues. On the other side of the coin, the topics chosen mostly by the scholars of pure science branches and partly by the scholars of other branches seem to be more of a general and universal nature. The qualitative output of any branch can never be restricted to domestic arena only. Some of the studies will certainly have the proud privilege of contributing something for the betterment of human life in general. The researchers of the university are heading towards that ultimate goal though slow but steadily.

References

1. Manipur University Annual Reports 1980-1991.
2. Statement of Awards of Doctorate Degree and Abstracts of the Thesis (June '84 – May '88) Manipur University.
3. Ph.D. Registration Register, Manipur University.

Exhibit 1: Some Basic Facts about Manipur

1 Latitude : 23.83^0 N to 25.68^0 N

2 Longitude: 93.03^0 E to 94.78^0 E

3 Altitude (Imphal) above MLS : 790 mtrs.

4 Average annual rainfall : 2077.7 mm (1984), 1467.5 mm (1987)

5 Climate Max. Temp. 32.0^0 C (Imphal)

Min. Temp. 0.0^0 Cm (Imphal)

6 Area : 22,327 sq. km. (Valley - 2238 sq. km, Hills 20,089 sq. Km.) (Urban – 151.1 sq. Km. Rural 22,175.5 sq. Km.)

7 Population (1981 census): 14,20,953 (Valley – 9,29,077, Hills – 4,91,876) (SC 1.2%; ST 27.3% of total population)

8 Tribes : 30 + 14 (unscheduled)

Major tribes: Thadou, Tangkhul, Kacha Naga, Mao, Kabui, Paite etc.

9 Religion : Hindu 60.4%, Christian 29.68%, Muslim 6.99%.

10 Educational Institutions (1981): Primary 2,726, Middle 447, Higher 329, Professional 517, College 28, Other : 41, University 01, Medical College 01, Agricultural College 01, Teacher Training College 03.

11 Literacy (1981) : 41.35% (Male 53.29%, Female 29.06%)

12 Forestry : 15,154 sq. Km.

13 Power capacity : Hydel MW 2.80, Diesel MW 21.89 (March 1987)

14 Budgeted expenditure on education :

Per Capita Rs. 216.96 (1985-86)

Percentage to total budget 24.01% (1985-86)

15 Land use: Total cropped area 184, Net irrigated area 65 (1983-84) ('000 hectares)

16 Fisheries : (a) Fish Farm -14; (b) Production ('000 tonnes) 5.00

17 Road mileage : 4324 Km. (1985)

18 Rainfall 158.32 cm (1981); 170.31 cm. (1982); 215.48 (1983); 177.91 cm. (1984); 170.63 cm. (1985) 170.25 cm. (1986); 209.21 (1987)

Source :

(i) Basic Statistics of North Eastern Region 1987

(ii) Statistical Handbook of Manipur 1985

(iii) Statistical Abstract of Manipur 1989, Directorate of Economics & Statistics, Govt. of Manipur.

Exhibit 2 : Ph.D Topic in Key words with Author and Year : School of Science (1980-91)

I Keywords of the Ph.D.Title

II Short name(s) of author(s) Year of announcement

Life Sciences

Ants, Manipur (Manmohini, 1990)
Bamboo, Manipur (Giri, 1989)
Bamboo, Nutritive value (Pravabati, 1988)

Deer, brow antlered (Shamungou, 1989)
Dove, spotted (Malik, 1991)

Eco system, grassland (Kakati, 1985)
Eco system, Shiroy hills (Jadu, 1989)
Eco system, soil respiration (Ikankhunbi, 1990)
Ethno-biology, Manipur (Dhanapati, 1989)
Ethno-Botany, study (Sinha, 1987)
Ethno-botany, Flora, Tamenglong District (O. Kumar, 1991)

Flora, Tengnoupal District (Bikram, 1988)
Flora, Kakching (Nara, 1990)
Flora Shiroy hills (Jadu, 1989)
Flora Tamenglong (O. Kumar, 1991)

Fish, Biochemical system (Sharif, 1988)
Fish, Chemotoxonomy (Viswanath, 1984)
Fish, Nutritive value, Manipur (Sarojnalini, 1989)
Fish Stream, Manipur (Gonchandra, 1990)

Fungi, wood (Shantibala G. 1984)
Fungi, wood (Shantibala, L. 1989)

Genetics, Meiotic prophase, analysis (Bhagirath, 1985)
Genetics, Cytology Mildew disease (Kabitarani, 1991)
Genetics, Orchids, Manipur (Jojita, 1987)

Insects, Manipur (Chaoba, 1990)
Insects, Manipur Aphid Parsitoids (Munal 1989)
Insects, Manipur, Thysanopteroceedia (Nilmani, 1989)
Insects, Silkworm, Chromosomes, India (Ibotombi, 1988)
Insects, Shiroy hills (Binoy, 1990)
Insects, Silkworm, Tasar, Biology (Naba, 1988)
Insects, Silkworm, Tasar, Oak (Rana, 1989)
Insects, Silkworm, Tasar (Nimaichand, 1991)
Insects, Silkworm, Wild, Gocon production (Rajendra, 1990)

Insects Pests, Mango, Manipur (Bhubaneswori, 1990)
Insects Pests, Banana, Manipur (Lukhoi, 1987)

Mosquitoes, Manipur (Rajput, 1987)
Manipur Orchids, (Jojita, 1987)
Plant Parasites, Fruits, Manipur (Gambhir, 1990)
Plant, Wildrice (Zizamia latifolla gall), Physiology (Kumar, 1985)

Physics

Thin metallic film, Electronic properties (K.Biren, 1988)
Thermally stimulated Luminescence, studies (Baten, 1988)
Thermally stimulated Luminescence, studies (Singha, 1989)
Thermally stimulated Luminescence, studies (Subodh, 1991)
Dynamics, Physical system (Brajamani, 1989)

Chemistry

Steroid Enol Lactones (Ramananda, 87)
Enamino Kelons (Lukhoi, 1991)
Vigna umbellata (Suchita, 1991)
216-Dieyano Anilino steroids (Khan, 1991)
Thermal Decomposition Reaction (Saha, 1987)
Thermal Investigation (Kanhai, 1988)
Transition Metalions (Hemkumar, 1988)
Cobalt III compledes (Rajmuhan, 1990)
Ion-pair formation (Rajen, 1991)

Earth Science

Bishenpur, Microlevel planning (Gitabali, 1990)
Transport, Manipur (Lahiri, 1989)

Earthquake, NER (Chakravarty, 1989)

Air temperature, solar radiation (Kunjabihari)

Anthropology

Tarao, Manipur (Bakul, 1990)
Meitei state, early period (Borababu, 1989)
Culture, Manipur (Mao, 1991)

Muslims, Manipur (Shah, 1991)

Mathematics

Inverses of Matrices (Nabachandra, 1987)
Functional analysis (Ranjit, 1989)
Operator, Fixed Points (Manihar, 1991)

Viscous Fluids – Distribution (K. Manihar, 1987)
Walkar universe – Distribution, problems (Dec. 1988)
Cosmological Model – Distribution (Ibotombi, 1989)
Theory of Relativity – Distribution, physical (Ratnaprobha, 1990)

Relativistic Cosmology – Dist., Electromagnetic (Joykumar, 1990)

Fluid Film lubrication, Math. analysis (Gopal, 1990)
Biomechanical aspects synovial joints (Sarat Chandra, 1991)

Waves, Plasma (Ibohanbi, 1991)
Waves, plasma (Karmakar, 1991)
Waves, propagation (Gourakishore, 1990)

Population dynamics, Manipur (Manglemjao, 1987)

Exhibit 3 : Ph.D. Topics in Keywords with Author and Year – School of Social Science (1980-91)

History & Political Science

Pakhangba to Khagemba : 33 A.D. to 1652 A.D. (Basanti, 1989)
History, Manipur : 1709-1826 (Kaoba, 1984)
British Rule in Hill Areas : 1891-1947 (Gina, 1990)
Maharaj Churachand (Serajuddin, 1991)

Religion and society in early Manipur (Jitendra, 1990)
Hinduism, Manipur (Pravabati, 1988)
Meiteis, Socio-religious life, 18th century (Birachandra, 1988)
Tribal, Christianity (Vaiphei, 1987)

Social movement Manipur: 1917-51 (Joykumar, 1988)
Popular movement Manipur: 1891-1950 (Lokendra, 1991)
Meitei Women (Irabot, 1991)

Education, Social development: 1872-1980 (Shanti, 1989)
Education, Catholic Mission (Irene, 1988)

Culture, Manipur (Promodini, 1988)
Creative Arts, Manipur (Bilasini, 1991)
Culture, Manipur, Social Anthropology (Mao, 1991)

Archaeology, Manipur (Kunjeswori, 1988)

Judicial system, Manipur: Prior 1891 (Ibohal, 1987)
Politics and Administration, Manipur: 1891-1949 (Badr-uddin, 1990)
Municipal Board, Imphal:1956-80 (Bino, 1985)
Legislative control over public expenditure, Manipur (Ibochouba, 90)

Paite tribe (Hauzel, 1988)
Hmars (Zarzolian, 1989)
Tribal and Christianity (Vaiphei, 1987)
Catholic Mission, Education (Irene, 1988)
Hill Areas, British rule: 1891-1947 (Gina, 1990)
Paite community (Guite,1989)
The Marams (Athickal,1991)
Scheduled Tribes, Economics, Manipur (Brapamandal, 1987)

Political partition, Manipur:1940-84 (Dhanabir, 1991)
Political integration North East & India (Swarnamayee 1991)
Governor, Manipur (Kunjarani, 1991)

Economics

Agriculture, N E Region (Ram, 1988)
Agriculture, Labour problem, Manipur (Bokul, 1990)
Agriculture, Marketing, Manipur, 1951-85 (Islamuddin, 1985)
Agriculture, Population, Manipur, 1951-85 (Kumar, 1988)
Agrarian Relation, Manipur (Mahendra, 1990)

Economics, History, Manipur, 1801-1951 (Ali, 1989)
Economics, Manipur (Krishna Mangal, 1987)
Economics, Scheduled Tribe, 1951-81 (Brajamandal, 1987)

Socio-economic development, Manipur (Banota, 1990)
Rural development, Manipur (Premeswori, 1990)
Cooperative movement, Manipur (Menjor, 1988)

Commerce

State-Industrial development (Rao, 1989)

Autority in Public Sector (Shah, 1990)

Library & Information Science

Serials control systems, University Library, North East (Lahiri, 1990)

Public Library system, Manipur (Khomdon,1991)

Exhibit 4 : Ph.D. Topic in Keywords with Author and Year – School of Humanities (1980-1991)

Manipuri

Literature, Manipuri, Medieval, Hinduism (Nolini, 1988)
Literature, Manipur: 18th Century (P. Nabachandra, 1990)
Fiction, Manipuri, 20th Century (Aruna, 1985)
Fiction Manipuri (Chonjon, 1986)

Poetry, Manipuri, Ancient (Ibochaoba, 1989)
Poetry, Folk, Manipuri (Nabachandra, 1988)

Folklore, Manipuri (Sanatombi, 1985)
Folklore, Kwatha village (Kumar, 1990)
Folkpoetry, Manipuri (Nabachandra, 1988)

Drama, Vaishnava (Tombi, 1989)
Drama, Modern, Social Problem, Manipuri (Shantibala, 1988)
Theatre, Manipuri, Traditional (Premchand, 1990)
English Dept.

Short stories, Manipuri, Modern (Ibemhal, 1990)

Games, Kang & Polo, Manipuri (Budha, 1989)

Linguistics

Grammar, Social, Meiteilon (Pramodini, 1990)
Grammar, Meitei (Nanigopal, 1988)
Grammar, Maram (Ibopishak, 1985)
Dialects, Imphal (Raghumani, 1985)

English

Eliot, Christian tradition (Khagendra, 1985)
Eliot, Social critic (Ibemnungshi, 1988)
Eliot, Theory & Practice of criticism (Lokendra, 1991)
Lawrence (Priyobrata,1989)
Christopher Brennan, Poetic achievement (Sanajaoba, 1991)
Donne, Browning : Comparative study (Ibempishak, 1991)
Stream of consciousness,Technique (Mani, 1988)
Manipuri Theatre (Premchand, 1990)

Philosophy

Vaishnava, Manipuri (Ibomcha, 1987)
Hinduism, Modern Indian Society (Iboton, 1991)

Hindi

Grammar, Study (Dubey, 1985)
Mansa Kavya, study (Nath, 1987)
Asamiya Lit (Sharma, 1987)
Bengali-Maitheli Dialect, study (Jha, 1986)
Rajasthani-Hariyani Folksongs, Study (Syamlal, 1986)
Hindi, Manipuri (Victoria, 1989)

Fiction, Nagarjin (Gupta, 1987)
Fiction, Hindi (Sher Singh, 1991)
Fiction, Himangshu Joshi (Dhondiyal, 1987)
Fiction, Renu (Sarda, 1989)

Stories, Hindi (Bechan, 1988)
Poetry, Hindi, Post 1970 (Rishava, 1988)
Ramyani Katha (Roma, 1989)
Ram-Rasayan and Ramras (Misra, 1990)

Folk-songs, Rajasthani & Braj (Carpenter,1991)
Folk-songs, Rajasthani & Hariyani (Shyamlal,1986)

Ranganathan and the Professional Development of Librarians Study in Professiology

Rajashekhar S. Devarai*

T. Damodaram**

Introduction

Men of genius and intellect are born in society from time to time to pursue the cause of dynamism, revival and change in the society. S.R. Ranganathan is one such scholar, intellectual, devotee and above all, an innovator and creator whose contribution both to the knowledge base of library science and its practice has an ever-lasting value. He is rightly accepted all over as father of library science in India. The then British Government honoured him with the title of RAO SAHEB by which he was referred to by his students, followers and well wishers affectionately (Garfield, 1985). He received number of awards, honours and citations which in no measure match his gigantic, painstaking and single handed struggle and contribution.

We have been using the concept of professional librarianship for the last hundred and odd years. Nevertheless there are number of problems and issues yet to be solved and resolved to lead librarianship[1] towards professionalisation. Some of the important ones are highlighted here so as to help us analyse Dr. Ranganathans' life and works in perspective.

Professional Image and Status

Debates, discussions and studies have been conducted especially since sixties on the image, status and role of librarians in society all over the world. Professiologists[2] are still not convinced about the full fledged status of librarianship as a professional calling. The apathy and neglect of sociologists towards the study of librarianship as an occupational category in quite unfortunate and regrettable (Chopra, 1986). The status and image problem remains as it is.

Further serious questions are raised from time to time about the theoretical, research and knowledge base of library profession. Probably it is due to this that the practice is further getting fragmented and always in crisis and in search of an identity (Goode, 1961; Mittermeyer, 1990; Boon and Rhona, 1990; Kumpulainen, 1991; Grover, 1991; Dyer & Stern, 1990).

Library Science, Information Science and Documentation

The practice due to its lack of foresightedness and over emphasis on tools, techniques and instruments is further getting fragmented into parallel disciplines and specialities with no links to an unified theory and knowledge base behind (Coste, 1990; Blom, 1991; Rowley, 1983). If the debate on the merger of ASLIB., the Lib. Association and the Institute of Information Scientists leads towards the unification of the profession, perhaps it will be an historical event for the profession (Sherwood, 1990).

Librarianship as a Profession

There are very few systematic research studies on librarianship as a profession which requires a considerable knowledge of sociology of professions. The end results and conclusions range from calling it a craft, occupation, semi-profession, emerging profession to full fledged profession. Library practitioners (including founders) time and again assert their occupation to have achieved professional status (Dewey, 1876; Ranganathan, 1967; Bundy, 1968; Edwards, 1975; North, 1977; Reeves, 1981; Asheim, 1979 and Birdsall, 1980), perhaps none of them base their assertions on systematic studies. Out of two systematic studies/research done on library profession in India, one considers library science to be a semi-profession (Jaiswal, 1990) and the other observes library practice to be a fast developing profession (Chopra, 1986).

Dr. Ranganathan's Vision, Approach and the Professional Model

As an intellectual, innovator and founder, Ranganathan was well aware of the sociological process of the emergence of a new profession. His every word and action was a calculated step towards the professional development of librarians leading towards the coveted title of a 'Profession'. Let us analyse his contribution and approach in the light of professional model envisaged

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[1] The terms 'Library Science', 'Librarianship', 'Library' and 'Librarian', are used in this paper to be inclusive of all segments and specialisations of library & information science as a discipline and profession.

[2] Sociologists and other researchers and scholars specialising in the study of occupations and professions.

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by sociologists. After a perusal of sociological literature on the concept of profession, Shaffer (1968) identified and summarised the following core characteristics which are commonly accepted these days throughout the world :

1. Specialised knowledge and skills;
2. Research and continuous in-service updating of specialised knowledge;
3. Intellectual activity;
4. Social necessity;
5. Service to the society rather than the personal gains;
6. Recognition by people and status in society;
7. Standardised terminology;
8. Close knit professional organisation having an altruistic philosophy;
9. Stability of the profession through permanent membership;
10. Code of ethics for the practitioners;
11. Autonomy of the profession; and
12. Authority of the practitioners.

Through his voluminous contribution of 60 books and 2 thousand and odd articles (Mohan Rajan, 1992) Rao Saheb surveyed every nook and corner of this discipline/practice and practically left no stone unturned. He enriched the knowledge and research base of this practice by his research and intellectual pursuits and his deep knowledge of Indian Philosophy and culture (Colon Classification, Classified Catalogue Code, Five Laws and Prolegomena to Library Classification) initiated, founded and nurture library schools (Madras University, Delhi University, BHU, DRTC etc.); founded and edited three professional periodicals. He laid the theoretical base upon which others can build (Shera & Perry, 1965). He always believed and practised the ideal of service and concentrated his whole body, mind and soul on the discipline of library science. He embraced it on a path to spiritual perfection (Garfield, 1985). Whole of his career was that of a professor professing for the cause of public image, and status of librarians and librarianship in society. He says, "Prestige and status cannot be given by others, you have to earn them yourself by your own devoted sincere work and service", (Ranganathan, 1981). Through his constant association with ISI and through his works like 'Prolegomena' he standardised and brought into usage innumerable terminologies so necessary for communication of professional knowledge. Rao Saheb was associated with several national and international professional organisations and associations like IASLIC, ILA, BLA, IFLA, FID/CRG, etc. Even during the days of Dr. Ranganathan the profession was divided and fragmented as we observe it today. Alas! the father of library science in India, the Einstein of the profession (Garifield) could not but resolve the centrifugal divisive forces. As he could brook no opposition from his professional colleagues, he cut off his connections with ILA after the Hyderabad session in 1953 as he believed firmly that his successors were never serious about furthering the cause of the profession and hence in the absence of a strong professional leader all the so called self proclaimed fragments and divisions were let loose to choose the way they decide. He always advised youngsters to put in best of their talents, devotion, dedication and sincerity to satisfy the information needs of the readers by treating them 'Atithi's (quests).

Rao Saheb was one of the few library scientists who contributed towards a base for professional code of ethics through his '*Five Laws*'. He had high hopes of the Librarians and librarianship. He dreamt of a full-fledged position of librarianship as a profession. In his paper prepared in 1969, he made his soul search and accepted that the librarians' status and prestige, salary and scale and teaching were at cross roads. On the contrary in the same article he opines, "...... that library craft has already entered the spiral of scientific method and has thus become ripe enough to satisfy the test for a profession (Ranganathan, 1981)". Hence it is imperative to believe that his assertions and statements regarding the attainment of full status by librarianship are more indicative of his goodwill, wishes and personal concern and commitment towards librarianship which need not be taken as a statement of a fact.

Legacy of Rao Saheb

Renaissance men are too rare in any field more so in our library profession. Rao Saheb is true master of the world stature, a colossus. His seminal influence in the profession of librarianship and the development of library movement is a subject for a separate study, perhaps a never ending process. A genius and innovator, a pioneer of library movement, a mentor and founder of the knowledge base of the profession, a great theoretician, a great benefactor, a profound author whose works had been cited four hundred times till 1985, who worked 16 hours a day all the seven days of the week, who took no leave in 20 years of service at Madras University Library, who worked on the wedding day, who lived in a sparsely accommodated home which lacked electricity (Garfield, 1985), is now no more than a part of our history and posterity. Ranganathan's thoughts and contributions are far advanced and ahead of our times specially as far as philosophy and theory of library science are concerned. The then President of India in 1965 stated "The Library Science and profession have secured a proper status in India mainly as a result of his work and teaching during the last 40 years (Rajendra Prasad, 1965)".

The Best Tribute :

A fitting tribute to Rao Saheb is to :

1. excell in the professional development towards full-fledged status as a profession;
2. strive towards unity of the profession;
3. maintain, nurture and enrich our professional knowledge base (theory, research);
4. maintain and enrich Indian library techniques in global librarianship;
5. edit, revise and make available all the works of Rao Saheb and to work out the implementation of the tools and techniques in atleast all "Indian Library Science Departments";
6. initiate a research project on sociological analysis of Ranganathan's contributions; and
7. pledge to study the professional model and understand the process of emergence of a new profession so that we can do the needful to our practice to achieve due professional status.

Let us end this paper with Rao Saheb's inspiring prayer (Ranganathan, 1981):

> "May the library profession raise itself on its own effort!
>
> May the Indian library profession regain its prestige and status;
>
> May its salary scale continue to be worthy of a profession!
>
> May the teaching of Library Science in India continue to be truly creative!
>
> May the Indian Library profession continually develop its library techniques;
>
> May it carry library science through successive spirals of scientific method;
>
> May it be ever becoming and ever new".

References

Asheim, Lester. 1979. Librarians as professionals. **Library Trends** 27 : 225-57.

Birdsall, W.J. 1980. Librarians and professionalism: status measured by outmoded models. **Canadian Library Journal** 27 : 145-148.

Blom, 1991, Inlighting-kunde en die toepassingsge biede daarvan (Information Science and its fields of applications) **South African Journal of LIS 58** (2) 138-146 (LISA Feb., 1991).

Boon, J.A. and Rhona, E.V.Z. 1990. Die stard van navorsing in bibliotech-en inlightingkunde in suid Africa : 'n macro otleding (State of the art of research in LIS in **South Africa: a macro analysis) South African Journal of Library and Information Science** 58 : 155-166 (Source : LISA).

Bundy, Mary Lee. 1968. Professionalism re-considered, **College & Research Libraries** 29 : 5-26.

Chopra, H.R. 1986. Study of librarianship as profession in India. p. 85-92 **In** Library and Information Science. Current trends in India : Prof. S.N. Srivastava Festschrift Vol. ed by Pawan K Gupta and Usha Pawan Jaipur : RBSA.

Costa, A.F.C.D. 1990. Ciencia da informacao : a passado a atualidade (Information Science : Past & Present) **Ciencia da Informacao** 19 (2) : 137-143 (Source : LISA).

Dewey, Melvil. 1876. The profession. American Library Journal 1 : 5-6.

Dyer, H. & Stern, R. 1990. Over coming barriers to library and Information Science research : a report of the first advanced Research Institute held at the University of Illinois at Urbana-champaign. **International Journal of Information & Library Research** 2 (2) : 129-134.

Edwards, Ralf M. 1975. The management of Libraries and the professional function of librarians. **Library Quarterly** 196 : 125- 27.

Garfield, E.1985. Father of Library Science in India a tribute to S.R. Ranaganathan. **Herald of Library Science** 24 (3) : 151-159.

Goode, W.J. 1961. The Librarian from occupation to profession. p.8-22. **In** Seven Questions about the profession of librarianship. Twenty sixth Annual Conference of the Graduate Library School June 21-23, 1971 Chicago : The University of Chicago Press.

Grover, R., Glazier, J. and Tsai, M. 1991. An analysis of Library and Information Science Research. Journal of **Educational Media & Library Sciences** 28 (3) : 276-278.

Jaiswal, P.K. 1990. Librarianship and bureaucratic organisation a study in the the sociology of Library profession in India, New Delhi: Concept.

Kumpulainen, S.1991. Library and Information Science Research in 1975 : Content analysis of Journal articles **LIBRI** 41 (1) : 59-76.

Mittermeyer, D.1990. Libraries as complex organisations: a concept in need of operational definition. **Library and Information Science Research** 12 (3) : 231-249.

Mohan Rajan, P.A. 1992. The miracle man. **The Hindu** August 9, 1992.

North, J.A. 1977. Librarianship : a profession. **Canadian Library Journal** 34 : 253-255.

Rajendra Prasad, 1965. Foreword in Library Science today Ranganathan Festschrift vol. 1 : Papers contributed on the 71st Birth Day of Dr. S.R. Ranganathan (12th August, 1962).

Ranganathan, S.R. 1967. Library Profession, its status and functions. **IASLIC Bulletin** 12 (4).

Ranganathan, S.R. 1981. Library profession of India at cross roads. **Herald of Library Science** 20 (1-2) : 15-22 (Script of the article prepared in 1969).

Reeves, W.J. 1981. Librarians as professionals, the occupation's impact on library work arrangements. Lexington : Lexington books.

Rowley, J. 1983. Has Information Science an identity? **Bulletin of the American Society for Information Science** 9(5) 30-31.

Shaffer, D.E. 1968. Maturity of Librarianship as a profession. New Jersy : Scarecrow Press.

Shera, J.H. and Perry, J.W. 1965. Changing concepts of classification : Philosophical and Educational implications. pp. 37-48 In Library Science Today : Ranganathan first Festschrift vol. 1 Papers contributed on the 71st Birth Day of Dr. S.R. Ranganathan Bombay : Asia Pub. House 832 p.

Sherwood, F. 1990. The merger debate **ASLIB INFORMATION** 18 (6) 187-188.

A Strategy on Higher Education

Prof. S. K. Khanna, Vice-Chairman, University Grants Commission, delivered the convocation address at the second annual convocation of the Bhavnagar University. In a very pragmatic address, often marked by some plain speaking, Prof Khanna said, "This is prime time that educational planners and the decision makers define and adopt a strategy on higher education for the coming decade with a specific timeframe for implementation. While we do this, we need to keep an eye on the fast global changes in the socio-economic political scenario and such development areas as are weak, or lack proper wherewithal should be identified and strengthened." Excerpts

The requirements of educational sector have grown many fold during the post independence period in response to ever increasing pressure on it. Today even with about 190 Universities and 7000 colleges in India, the percentage of youth population which received opportunities for higher education is dismally small. As years go by the demand on higher education is going to increase steeply. In view of this, the educationists and planners will have to devise and adopt innovative ways. We also need to ponder over a serious mis-match and some glaring contradictions. The statistics show that about 20% of over 17 million educated unemployed are graduates and postgraduates.

We should realise that an average annual income of about six families in India is equivalent to the expenditure being incurred per university student. There is also a very serious need to correlate higher education, training and research with manpower needs. Universities have to work together closely with the development sectors in deciding the content and the scope of studies. We should keep in mind that about 8000 recipients of doctorate degrees are available to us every year but there is no meaningful absorption in the national stream. We need to redesign seriously our educational and research programmes by breaking away the classical barriers and water-tight compartments which have so far been unproductive. Education merely for the sake of education, is luxury which we cannot afford. Research and teaching should and must reinforce each other towards professional bias. If we allow our education system to grow in its present form beyond the year 2000, it is bound to become completely unmanageable. We will not have enough resources and instead of uneducated youth, we would have on our hand educated youth, unemployed and unemployable.

This is the prime time that the educational planners and the decision makers define and adopt a strategy on higher education for the coming decade with a specific timeframe for implementation. While we do this, we need to keep an eye on the fast global changes in the socio-economic political scenario and such development areas as are weak, or lack proper wherewithal should be identified and strengthened.

Our foremost and formidable problem is that of sheer number, number of institutions, the number of students enrolled, and the massive manpower which is sustaining as well as utilizing the facilities of the Higher Education Sector. We have to be clear and concise about the future type and level of manpower needed to contribute to the national development. Some percentage of the youth should be diverted at an early stage to such sectors which require minimum training or skill; for example, support staff system to sustain agriculture as well as the industrial sector. Enrolment must be selective and based on the projections of manpower planning. The manpower needs on regional basis must therefore, be determined without delay. The State Councils of Higher Education must be established in the states which in turn should take up this work on priority. After ascertaining the type, and the level of various graduate and postgraduate requirements, we must also determine and identify the enrolment percentages of graduates required for major streams. And then we may think of some innovative undergraduate education system.

We may have a common undergraduate education programme for one year, out of the +3 year frame, and the remaining period can be utilized in diversified disciplines. A common first-degree without dividing into traditional areas like Arts, Humanities, Social Sciences and Natural Sciences and other disciplines would be a good idea. The remaining two-third period of the undergraduateship including compulsory internship could be utilized for specific diversified areas linked with the development sectors, be it agriculture, industry, commerce, medicine, engineering, banking, support service (technical and administrative) or other such areas. Further, divisions could be possible at the micro level by dividing major sectors according to speciality. The output from such an educational system would be employable as well as quite capable of generating its own employment.

Reform of today's tedious and indeed unreliable examination and evaluation process should be our first item on agenda. We should adopt built-in evaluation system at micro levels. The continuous evaluation alone can assess the quality of education and training imparted and received. The sooner, we simplify the evaluation system and make it more scientific and reliable, the better.

The Higher Education System should be flexible enough to encourage the students to leave formal education and enable him to rejoin at an appropriate stage if and when necessary. For this purpose, a suitable mechanism of interchanges from formal to non-formal and vice versa should be evolved, alongwith the facilities for continuing education programmes. One should earn credits at different stages and obtain a degree when all requirements have been fulfilled.

The postgraduate education and research cannot be treated as 'waiting period' for youth to look for suitable employment opportunities, or for settling down in life. A clearly defined strategy, in a five year frame, for deciding the extent and types of postgraduate education and research must be evolved and adopted. It is a far fetched argument that the scientific research cannot be timebound and no specific timeframe can be assigned. This is just not correct.

Financial resources, as we know, are meagre. Alternative sources for funding research must therefore, be tapped. Universities will have to share their faculty time for research with the industry. In doing so, the type and the quality of research will have to be intimately linked with the needs of the industrial sector. This interaction with industries will be essential for realistically framing and revising academic curricula, strengthening research, ensuring vocational bias for employment, manpower planning and exchange and even securing inter-industrial, inter-institutional and international collaboration including financial assistance in research and development. India has a reservoir of competent manpower and massive infrastructural facilities for pursuing science research. It is desirable to tie up with global agencies and industrial houses for obtaining awards or assignments for pursuing research with link ups entailing royalty benefits. Because of high costs, the basic research could be afforded by the rich countries alone and without basic research no breakthrough in science and technology is possible. This calls for global commercialization of basic research. The global industrial sectors would hire our manpower and time, and use the capabilities of the Indian University System who could then undertake scientific research, especially the basic research with full financial sponsorship. In turn, this interaction would help them save time and high costs. Eventually this togetherness would lead to an allround betterment. We must plan globally and act locally.

It is abundantly clear that the management structure of the Indian Higher Education System, including universities needs serious reappraisal. The present condition of lack of enthusiasm and initiative on the part of the manpower participating in the system must be changed for the better. Individuals should be made to assume and think that they are their own masters for fulfilling their objectives. They must be encouraged to take initiatives. For this, we shall have to dispense with existing bureaucratic and hierarchical systems and adopt decentralization. Incentives to individuals and institutions must be linked to the efficiency and output.

It may also be necessary to generate additional resource by instituting endowments, providing capital grants supplemented by raising resources for running expenses. We need to rationalize the resources from beneficiaries, and from the industry for sponsored research. We may also charge placement costs to the sectors hiring the products of the Higher Education System. Gone are the days when academics dismissed business men as 'unconcerned' and businessmen denounced academics as 'irrelevant'. Through interaction, British universities are now earning sizeable percentage of their regular yearly income from the corporate sources. In Japan, the U.S.A. and Germany these earnings are to the tune of 3.5%, 7.5% and 6.5%, respectively.

Some of the aforesaid suggestions may at present appear drastic but they will pay rich dividends. This reminds me the immortal lines of Robert Frost:

> "Two roads diverged in a Wood and,
> I took the one less travelled by,
> And that has made all the
> difference."

AIU'S ANNUAL GENERAL MEETING

The 67th Annual Meeting of the Association of Indian Universities (AIU) earlier scheduled to he held from November 17 to November 19, 1992 at Pt. Ravishankar University, Raipur would now be held at Pondicherry University, Pondicherry on December 20, 21 & 22, 1992.

The change has been necessitated because of the continued disruption in the flight schedule.

The Vice-Chancellors/Directors of member Universities/Institutes are requested to kindly bear with us and to kindly note this change of venue and dates.

Secretary, AIU

CAMPUS NEWS

Refresher Course in English

The Academic Staff College of the Himachal Pradesh University, Shimla, organised a 3-week Refresher Course in English from October 3-23, 1992. Inaugurating the course, Prof. K.C. Malhotra, Vice-Chancellor, highlighted the importance of language in the transmission of knowledge and personality development. 'Language enriches one's mind and provides instruments to express one's own feelings and ideas. English has played vital role in sharing and growth of sceintific and technological knowledge. It must reach in appropriate form to all those who need it', he added. Prof. Malhotra further described the task of teaching English as complex and a great challenge.

The thrust areas of the course were ELT & New Literatures in English i.e. Contemporary Literature from Africa, Australia, West Indies, Canada and the Indian subcontinent, covering all the principal genres – poetry, drama, fiction and criticism.

The thrust area for the programme was chosen after long and careful deliberation for various reasons : a good deal of significant literature is being written in the third world today; as it is comparatively unfamiliar and new literature, university and college teachers teaching in remote and mofussil places, having obtained their Master's degrees a decade ago, are often found deficient in this discipline. Hence the relevance and significance of the New Literatures in English.

Realizing the prssing need of the teachers on the basis of their genuine difficulty experienced by them in teaching English language to the +2 and undergraduate students in the Indian contexts, special emphasis was laid on this aspect and a comprehensive sixteen-session lecture programme exclusively devoted to ELT was organized which was found extremely useful and stimulating by all the participants.

Another highlight of the course was a detailed discussion of the various syllabi of English being taught in various universities/colleges represented by the participants. The discussion provided an interesting and lively debate, pinpointing the major drawbacks in the syllabi and the ways to improve them.

The programme was split under three heads : (i) literary journalism, (ii) book review, (iii) research methodology and potential areas of research. The participants evinced keen interest in their respective groups, and found their exposure to these specialized fields quite meaningful and academically rewarding.

A 200-page Volume devoted to ELT, Indian English Literature and the New Literatures in English – a collection of about 25 research articles – collected and compiled from various literary journals and periodicals of International distinction, was gifted to all the participants.

In his valedictory address, Prof. K.C. Malhotra, Vice-Chancellor, H.P. University, emphasized that the language teachers had additional responsibility of influencing the personality development process of students. He also called upon them to revise the teaching syllabi keeping in view the needs of the changing times and expectations of the students. Prof. B.S. Pathania, Chairman, Dept. of English, Dr. Shyam Asnani, Coordinator of the Programme and Dr. Yoginder Verma, Director of Academic Staff College also spoke on the relevance and utility of such programmes.

Decentralisation of Varsity Admn

Prof. G. Ram Reddy, Chairman of the University Grants Commission, said that accountability must be built in the concept of decentralisation, if any university administration was to be decentralised. He was participating in a symposium on 'Decentralisation of University Administration – Structural Changes', organised by the Osmania University Teachers' Association (OUTA) in Hyderabad recently. Prof. Reddy said an oversized university would not be conducive for proper functioning. It also becomes a necessity if authorities wanted to involve teaching and non-teaching staff in the day-to-day affairs of the university administration, he said.

He said the main problem with the universities' campuses was that they were becoming troubled campuses now. They were not healthy and were facing a number of difficulties. Keeping this in view the National Policy on education also emphasised the need to bring in certain reforms, particularly delegation of power.

Prof. Ram Reddy, while cautioning about the risks involved in the decentralisation, said the people might misinterpret the decision stating that the authorities were unable to manage the affairs. Instead, these people should appreciate the decision and feel it a necessity for discharging the duties effectively.

In his address, the Osmania University Vice-Chancellor Prof. M. Malla Reddy, while advocating decentralisation for a successful administration, suggested that the problems faced in day-to-day administration must be shared with equal responsibility and concern by all.

Law Course in Bengali

The West Bengal Government is reported to have decided to urge the Calcutta University to introduce an undergraduate law course in Bengali. The state government, with the help of a committee has put together a detailed glossary of legal terms in Bengali which is likely to facilitate the teaching of the subject in the regional language.

The state judicial minister, Mr. Abdul Quayum Molla, said in Calcutta recently that he had already discussed the issue with Dr. Amit Sen, dean of the university's law faculty. Dr. Sen is a member of the committee formed to decide Bengali legal terms.

Mr. Molla said he would direct the courts of Bankura, Jalpaiguri and South-24-Parganas to change over to Bengali in the first instance and hoped that the changeover in the three districts would be completed between December this year and March next year.

Mr. Molla said the changeover in South-24-Parganas would imply that all legal work in Sealdah, Baruipur and Diamond Harbour courts, wil have to be done in Bengali. At Alipore Court, Bengali will be used till the level of chief judicial magistrate. As per directive of the Union Government the district judges' courts would continue to use English as before.

Sexual Behaviour & Reproductive Health

As part of the World Health Organization's global AIDS control programme, the Anthropology Department of Vidyasagar University will soon undertake research into differences in sexual behaviour and reproductive health among different communities in Midnapore district of West Bengal. The decision was taken at an international workshop on "Reproductive health and pollution: sexual behaviour research for the Asian region" held in Bangkok recently.

According to WHO's directives, the research will include sexual behaviour in adolescents, sexual behaviour in marriage and non- formal unions, sexual behaviour and gender power relations, sexual practice and contraceptive choice and changes in sexual behaviour.

Stating this, Professor Abhijit Guha of Vidyasagar University, who attended the workshop, said that the project would study married women, in the age group 15-44. Data would be collected on pre-marital, marital and extra-marital sexual behaviour of the population along with contraceptive choice and use, sexual abstinence abortion, sterilization, breast feeding and a variety of other related behaviours affecting maternal and child health as well as population growth, Professor Guha said.

Dr. Axel I. Mundigo, one of the WHO experts, commented, "The AIDS epidemic has ushered in a new era in the way sexual relations are perceived and acted upon: the counter-image of safe sex is that sex can be dangerous.".

The workshop followed by one in Latin America and another in Africa, sponsored jointly by the WHO and the Institute for Population and Social Research (IPSR), Mahidol University, Bangkok, was attended by about 20 scientists from Indonesia, Korea, Nepal, the Philippines, Vietnam, Thailand, Burma and India.

AEB Awards 1992

The 13th Annual Session of the Academy of Environmental Biology (AEB) will be held at Meerut as a part of Meerut College Centenary Celebrations from December 27-29, 1992. On this occasion a Symposium and BRPM Competition on "Toxicology, Conservation & Biodiversity" will also be organised. The main objectives of the session are to review and analyse the situations and to take stock of the outstanding problems of the Environment besides providing the scientists and members of AEB a forum for exchange of information and updating the current knowledge of Toxicology, Conservation & Biodiversity. The programme will consist of Paper reading sessions, Invited lectures, Meetings and Group discussions.

On this occasion the AEB would also present awards to (i) Dr. (Miss) Niloufer Jamshed Chinoy, Professor and Head, Deptt. of Zoology, University School of Sciences, Gujarat University, Ahmedabad who has been selected for "Archana Medal - 1991", an Environment and Toxicology AEB Fellow Award. It comprises a gold medal and Citation; (ii) Dr. Ajay K. Awasthi, School of Environmental Biology, APS University, Rewa who has been selected for "7th JEB PRIZE- 1991", a youg scientist award, instituted by JEB Foundation. The Prize includes a cash award of Rs. 1000 plus a Gold Medal and a Citation; (iii) Mr. S.C. Deb, SRF, National Environmental Engineering Research Institute (NEERI), Calcutta Zonal Laboratory, who has won the "*BRP Medal-1991*"; and (iv) Dr S.K. Sundrarajan, Deptt. of Botany, Saraswathi Narayan College, Madurai, Ms. Vandana Pathak, Deptt. of Chemistry, Dr H.S. Gour University, Sagar, Ms. Sarita Sachdeva, Deptt. of Biosciences, M.D.University, Rohtak, and Ms. Mamta Goswami, Deptt. of Life Sciences, Ravishankar University, Raipur, and Mr. N.Ninge Gowada, Deptt. of Studies in Zoology, University of Mysore, Mysore who were recommended for the "*BPA Certificate-1991*" by the Committee consitiued during 12th Annual Session of the Academy held at Rewa (M.P.).

Further details may be had from Dr. M.C. Bhatnagar, Org. Secretary, Department of Zoology, Meerut College, Meerut-250001 (U.P.)

Certificate Course in Library Science

The North Eastern Hill University has started a Certificate Course in Library Science at its Nagaland Campus, Kohima. The objectives of the course are (1) to provide an understanding of the basic principles of Library Science; (2) to impart training in the techniques of organisation and management of libraries; and (3) to acquaint the students with socio-cultural, education and communication aspects of the Library.

News from Agricultural Universities

US Grants for Agricultural Research

The United States department of agriculture has awarded five grants totalling Rs 91.88 lakh to support cooperative agricultural research projects in Indian institutions.

The grants will help fund Indo-US studies aimed at understanding crop plant viruses and controlling nematodes using natural substances and organisms, prevent the breakdown of the immune system in cattle by using cell-regulating compounds, increase crop production by utilising household sewage and industrial wastes and identify pest resistant high-yielding strains of cotton seeds.

The institutions which have recieved the grants include the Sri Venkateswara University which received Rs. 21.54 lakh for a three-year project to study biological changes which take place in a plant cell when it is attacked by a virus, Haryana Agricultural University (Rs 20.18 lakh), the Indian Veterinary Research Institute at Izatnagar (Rs. 20.11 laksh), the Tamil Nadu Agricultural University in Coimbatore (Rs 16.31 lakh), and the Institute for Cotton Research, Nagpur (Rs 13.72 lakh).

News from UGC

Countrywide Classroom Programme

Between 16th November to 21st November, 1992 the following schedule of telecast of higher education through INSAT-1D under the aspices of the University Grants Commission will be observed. The programme is presented in two sets of one hour duration each every day from 1.00 p.m. to 2.00 p.m. and 4.00 to 5.00 p.m. The programme is available on the TV Network throughout the country.

Ist Transmission

1.00 p.m. to 2.00 p.m.

16.11.1992

"Solar Photovoltaic."

"Soil Testing."

"Towards a Bright Future: The Economy - III."

17.11.1992

"Instrumental Techniques."

"Taka Care - It's Your Heart."

18.11.1992

"The Story of the Blue Planet."

"The Insect Eater."

"Ancient Egypt: The Valley of the Nile"

19.11.1992

"Buried Treasure: Copper."

"A Writer and His Work."

20.11.1992

"Drunken Driving."

"Wood for the Tree."

"Child Psychiatry -II: Identify the Problem Child."

21.11.1992

"Nrityaganga - V: Aesthetics of Music for Dance."

"Language of the Mute."

"Week Ahead."

IInd Transmission

4.00 p.m. to 5.00 p.m.

16.11.1992

"Oscillation of Waves."

"Jojoba: A Future Plant - II."

"Work Ethos and Indian Thought."

17.11.1992

"Plastics and Polymers in Daily Life - II."

"AIDS - The HIV Virus."

"Teaching as a Career."

18.11.1992

"In Vitro Vegetative Multiplication."

"Biology of Millipedes."

"Stress Without Duress."

19.11.1992

"Coal - I: The Captive Sun."

"Masterpieces in World Literature:Aeschylus and the Oresteia Trilogy."

"Bandhej - The Art of Tie and Dye."

20.11.1992

"Mobius Band"

"Anuradha - The Cosmic Searcher."

"Imbibing Global Ecology A Unique Experiment in Learning."

21.11.1992

"Nrityaganga -I."

"Guitar Playing Techniques -II."

"Week Ahead."

News from Abroad

Funding on Self-Assessment

Self-Assessment is the cornerstone of the Scottish Higher Education Funding Council's (SHEFC) new teaching quality assessment scheme. Unlike England, there will be no second pilot scheme, and institutions have a November deadline for submitting self assessments in economics, and electrical and electronic engineering.

SHEFC is adopting a much lighter touch than the controversial initial pilot, with teams of between two and four assessors visiting institutions in the New Year for two to three days, compared with up to six assessors for a week.

Assessors will not visit every institution, although a claim of excellence will mean an automatic visitation, with several other institutions chosen to provide a comparison.

The reports will be published, and SHEFC has already agreed that institutions will be rewarded with extra funded student places, but it stresses that no decisions have yet been made on the impact on institutions.

Initially, it will use a three point scale of "excellent", "satisfactory" and "unsatisfactory", but its newly appointed, nine member quality assessment committee will discuss whether this scale should be extended.

The Association of University Teachers, Scotland has warned that teaching quality could suffer from the increased workload created by self assessment, and that evaluating institutions' submissions will be too costly both in terms of SHEFC's own resources and academic experts's time.

But SHEFC believes self assessment will build on work already underway in institutions, rather than being an additional imposition.

Australia Plans Credit Transfer Framework

Australian Universities have agreed on new mechanisms to make it easier for students to gain credit for prior learning or work experience.

With the backing of the federal government, universities are to introduce a national credit transfer framework next year. Under it, students in technical and further education colleges will be able to obtain exemptions of upto two years if they transfer to degree courses in universities. Australians who have been employed may also be given credit depending on their type of work.

The government has been pressing universities to adopt more liberal credit transfer policies. Before abolishing colleges of advanced education, it promoted credit transfer so students were not disadvantaged.

To meet huge unmet demand by school leavers for university places, the government is expanding the Technical and Further Education (TAFE) system and establishing a new open university. But students hoping to transfer to university need to be assured that they will get credit for studies undertaken in alternative post-secondary institutions.

The Australian Vice-Chancellors' Committee has set out the principles of credit transfer scheme. Committee chariman Ken McKinnon said a credit transfer system would provide greater opportunities for students and lower costs.

ACU Secy Genl Honoured

Dr. Anastasios Christodoulou, Secretary General of the Association of Commonwealth Universities (ACU) has been awarded an honorary degree of Doctor of Civil Law by Acadia University, Canada. The doctorate was conferred on Dr. Christodoulou on 17 October at Acadia's annual Fall Convocation.

Dr. Christodoulou, who was Convocation speaker, said at the ceremony: "In saluting me, Acadia is in essence saluting that remarkable modern Commonwealth of Nations itself. Both it and the universities of its countries are, in a very real sense, inextricably linked: one provides the international political framework and some resources within which the universities have been able to continue to work together effectively; while the universities themselves have kept alive the values that underpin genuine internationalism".

Dr. Christodoulou has been Secretary General of the ACU since 1980, and before that was foundation secretary of the U.K.'s Open University.

THESES OF THE MONTH

A list of doctoral theses accepted by Indian Universities

BIOLOGICAL SCIENCES

Anthropology

1. Pandey, Sarita. **Epidemiology of dental caries in rural and urban population of Bundelkhand Region.** H S Gour. Dr A N Sharma, Department of Anthropology, Dr Hari Singh Gour Vishwavidyalaya, Sagar.

Biology

1. Garg, Dinesh Kumar. **Effect of water quality parameters on biota.** Roorkee.

2. Joshi, Sunita. **Genetic and developmental studies on Drosophila loci controlling cell proliferation.** Devi Ahilya. Dr Pradeep Sinha, Department of Biology, Devi Ahilya Vishwavidyalaya, Indore

Marine Sciences

1. Ghosh, Phanibhushan. **Studies on some inorganic and organic components in the sediments of Hooghly Estuary.** Calcutta.

2. Selvam, V. **Environmental concerns on the hydrobiology of the Muthupet mangrove ecosystem, Tamil Nadu, India.** Madras.

Biophysics

1. Mahanta, Sanjeev Kumar. **Carbohydrate binding analysis, primary structure and structure-function correlationship of Artocarpus integrifolia agglutinin, jacalin.** IISc.

2. Mathew, Billey Graham. **Some energy dissipative processes of living systems.** NEHU. Dr Satish Kumar, Department of Biophysics, North Eastern Hill University, Shillong.

3. Sekar, K. **Some statistical applications and structural studies in crystallography.** Madras.

Biochemistry

1. Kamat, Ujjwala D. **Studies on plasma membrane, 1,3 beta D-glucan synthase of peanut cotyledon cells.** Roorkee.

2. Pahan, Kalipada. **Ecological and biochemical studies on mercury resistant bacteria originating from different water bodies of West Bengal.** Calcutta.

3. Partheeban, G. **Microbial studies on dithiocarbamates and antidotal effects of zinc iminodiacetic and dithiocarbamate against toxicity induced by cis-platin.** Madras.

4. Penta, Kalyani. **Stimulation of NADH oxidation and oxygen uptake by oxovanadium compounds.** IISc.

5.. Thakur, Swarajya. **Growth performances of crossbred goats on different planes of nutrition.** Birsa Agrl.

Microbiology

1. Mitra, Akash. **Studies on microbial degradation of lignin and related substances.** Bhavnagar. Prof H C Dube.

Botany

1. Ameeta, P. **Studies on vesicular-arbuscular mycorrhizal fungi associated with Dalbergia sisoo Roxb.** Osmania.

2. Belho, Vituo. **Pollen physiology of alkaloid yielding solanums, S khasianum Clarke and S marginatum Lf and flower bud development of S khasianum in vitro.** NEHU. Prof Y S Chauhan, Department of Botany, North Eastern Hill University, Shillong.

3. Butchi Raju, Jagarapu. **A contribution to the morphology of some Convolvulaceae.** Andhra.

4. Chauhan, Manju. **Studies on distribution and function of ectomycorrhizae in uptake and translocation of labelled compounds (32P and 14C) in pine seedlings.** NEHU. Dr G D Mishra and Dr R R Mishra, Prof and Head, Department of Botany, North Eastern Hill University, Shillong.

5. Das, Jharna Rani. **Role of glutamate dehydrogenase in ammonia management in a fresh water air-breathing teleost, Heteropneustes fossilis.** NEHU. Dr B Ratha, Prof, Department of Zoology, North Eastern Hill University, Shillong.

6. Datta, Krishnendu. **Taxonomic investigation on pyrenomycetous fungi of West Bengal.** Calcutta.

7. Duarah, Rubul. **An ecological study of weeds growing in the rice fields of Majuli Sub Division with special reference to their reproductive capacity.** Dibrugarh. Dr S K Sarma, Reader, Department of Life Sciences, Dibrugarh University, Dibrugarh.

8. Ghaisas, Vivek Anant. **Morphological and histochemical investigations on some oil yielding grasses.** Nagpur. Dr K H Makde, Reader, Department of Botany, Nagpur University, Nagpur and Dr K D Gomkale, Reader, M M College of Science, Nagpur.

9. Ghosh Hazra, Mita. **Algal ecology of two streams draining deforested catchments at Shillong.** NEHU. Dr J P Gaur, Reader, Department of Botany, North Eastern Hill University, Shillong.

10. Handique, Pratap Jyoti. **An investigation on ferns and fern-allies of Kamrup District of Assam with special reference to cytological studies on the genus Pteris Linn.** Gauhati. Dr G Konger, Prof, Department of Applied Botany and Biotechnology, Gauhati University, Guwahati.

11. Hemalatha, R. **Studies on Gracilaria edulis (Gmelin) Silva.** Madras.

12. Jain, Rajendra Kumar. **Screening of Sagar market samples of fruits and vegetables for pesticide residue.** HS Gour. Dr K N Soni, Department of Botany and Dr V S Bais, Department of Zoology, Dr Hari Singh Gour Vishwavidyalaya, Sagar.

13. Konar, Jagannath. **Autecological study of Costus speciosus as a source of diosgenin.** Burdwan. Dr Debi Prasad Kushari, Reader, Department of Botany, University of Burdwan, Burdwan.

14. Kusam Chand. **Micropropagation and conservation of Indian orchids.** Panjab.

15. Manjit Kaur. **Biochemical studies on some algae of polluted areas.** Panjab.

16. Nagari, Sangita. **In vitro studies on an economically important limbellifer, Bunium persicum Boiss.** Jammu. Dr A K Wakhloo, Reader, Department of Botany, University of Jammu,, Jammu.

17. Naik, Laxmikant Prabhakar. **Distribution and seasonal variation of micro invertebrate planktonic fauna and macrobenthos in relation to certain hydrobiological conditions of river Narmada.** HS Gour. Dr K S Unni, Department of Botany, Govt Post Graduate College, Chhindwara.

18. Nataraj, M. **In vitro studies in three angiosperm taxa.** Patel. Dr J A Inamdar, Prof and Head (Retd), Department of Biosciences, Sardar Patel University, Vallabh Vidyanagar.

19. Pitchaiah, Ch. **Mutagenic and tissue culture studies in Phaseolus trilobus Ait.** Osmania.

20. Rama Pulla Reddy, P. **Studies on vesicular arbuscular mycorrhizal fungi associated with polluted and non-polluted soils.** Osmania.

21. Ramesh, Kamala. **Embryological studies in Liliaceae, Amaryllidaceae and Bromeliaceae.** Andhra.

22. Samanta, Tuhin Kumar. **Production of lysine by mutants of Arthrobacter globiformis.** Burdwan. Dr S P Chatterjee, Prof, Department of Botany, University of Burdwan, Burdwan.

23. Sanish, S. **Studies on Salicornia.** Bhavnagar. Dr E R R Iyengar.

24. Santhan, P. **Systematics and karyomorphology of some South Indian Orchidaceae.** Madras.

25. Saratkumar, G. **Air pollution studies of some plants of Kota.** Vikram. Dr P S Dubey, Prof and Head, Department of Botany, Vikram University, Ujjain.

26. Wilson, L Arnold. **Developmental studies in Musa.** Calicut. Dr V J Philip, Department of Botany, University of Calicut, Calicut.

Agriculture

1. Bhupinder Singh. **Mechanism of lindane resistance in Tribolium castaneum Herbst (Coleoptera : Tenebrionidae).** PAU.

2. Daiho,Loli. **Study on soil micro-organisms in Jhum land ecosystem at Medziphema, Nagaland.** NEHU. Dr D N Upadhyay.

3. Lonkar, Sudhakar Ganpatrao. **Genetics of fertility restoration in relation to cytoplasmic diversity in Sorghum.** Marathwada Agrl. Dr S T Borikar, Officer Incharge, Seed Technology Research Unit, Marathwada Agricultural University, Parbhani.

4. Pathak, Jivan Jyoti. **Studies on the identity, host range, bionomics and control of nematodes infesting jute crop in Assam.** Dibrugarh. Dr R P Choudhury, Prof (Retd), Department of Life Sciences, Dibrugarh University, Dibrugarh.

5. Satwinder Kaur. **Development of chromosomal addition lines in Brassica campestris.** PAU.

Zoology

1. Baruah, Santana. **A study on the development biology of Antheraea assama in relation to the productivity of the silk-yarn.** Gauhati. Dr (Mrs) M Das, Prof. Department of Zoology, Gauhati University, Guwahati.

2. Gautam Chandra. **Transmission dynamics of Bancroftian filariasis in relation to the vector Culex quinquefasciatus in an urban and a rural area of West Bengal.** Burdwan. Dr Giridhari Majumdar, Prof, Department of Zoology, University of Burdwan and Dr Amiya Kumar Hati, Prof, Department of Medical Entomology, Calcutta School of Tropical Medicine, Calcutta.

3. Hiremath, Channayya Rajasekhar. **Acoustics and reproductive biology of some anurans.** Karnatak. Dr R D Kanamadi, Reader, Department of Zoology, Karnatak University, Dharwad.

4. Laxmi, R. **Toxicity of inorganic mercury and hexavalent chromium to mudskipper, Boleophthalmus dentatus I changes in enzymic levels in some vital organs.** Saurashtra. Dr A P Mausuri.

5. Mandal, Swapan Kumar. **Taxonomy, biology and seasonal abundance of grasshopper pests of field crops and vegetables in West Bengal.** Burdwan. Dr Prasanta Kumar Choudhuri, Department of Zoology, University of Burdwan, Burdwan.

6. Mangat, Sandeep Singh. **Quantitation of the cytogenetic damage in the occupationally exposed workers in vitro with and without herbal drugs.** Panjab.

7. Mansabdar, Vinodini. **Cytochemical investigations of the various stages in the life-cycle of polycystid gregarine, Stylocephalus sp.** Karnatak. Dr R N Desai, Head, Department of Zoology, Karnatak Science College, Dharwad.

8. Paul, Dibyendu. **Ecological studies on soil arthropods in forests and agroecosystems of Meghalaya.** NEHU. Dr J R B Alfred, Joint Director, Zoological Survey of India, Calcutta.

9. Singh, Pushpraj. **Limnological investigation of Jagatdev Talab, Satna, M P.** Awadhesh. Dr B P Mishra, Prof, Department of Zoology, Govt Science College, Rewa.

10. Sinha, Baby. **Studies on free-living benthic nematodes of the Gangetic Estuary, West Bengal, India.** Calcutta.

11. Sivaganesan, N. **Ecology and conservation of Asian elephants, Elephas maximus with special reference to the habitat utilization in Mudumalai Wildlife Sanctuary, Tamil Nadu, South India.** Bharathidasan. Dr M C Sathyanarayana, Division of Wildlife Biology, A V C College, Mannampandal, Mayiladuthurai.

12. Sood, Ambrish. **Studies on the ionic content, ATPase activity and myosin light chains in chick skeletal muscle under stress conditions.** HP.

13. Subramanyam, Sudha. **A study on the genotoxic effects of chromium.** Madras.

14. Uma, S. **Biology of the food fish, Macrognathus aculeatus Bloch.** Osmania.

Medical Sciences

1. Das, Sobhana. **Physical exercise on different phases of menstrual cycle and other related physiological responses of healthy women.** Calcutta.

2. Shailaja, K. **Autonomic blockade and hepatic regeneration in albino rats.** Madras.

3. Shandil, Radha Krishan. **Identification and purification of immune protective Entamoeba histolytica (HMI) protein by monoclonal antibodies.** PGI.

CLASSIFIED ADVERTISEMENTS

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Advertisement No. 16586/L3/92 **Dated 23.10.92**

Applications in the prescribed form are invited for the following posts in this University. Application form, details of prescribed qualifications/field of specialisation and other particulars can be had from the Registrar, Anna University, Madras-25, on requisition, accompanied by a crossed Demand Draft for Rs. 20/- (Rupees twenty only) dated not earlier than 5.11.92 drawn in favour of the Registrar, Anna University, Madras-25 together with a self-addressed stamped envelope (Rs. 4/-) of size 22 x 10 cms.

Name of the Post	Name of the Institution where the vacancy exists
1. Professor of Environmental Engineering/Environmental Science :	Centre for Environmental Studies, College of Engineering.
2. Lecturer in Ceramic Technology/ Senior Research Fellow :	Ceramic Technology, Alagappa College of Technology.
3. Professor/Assistant Professor/Lecturer :	School of Computer Science and Engineering, College of Engineering.
4. Reader in Physics :	Department of Chemical Engineering, Alagappa College of Technology.
5. Assistant Professor in System Studies/ Assistant Professor in Irrigation Water Management :	Centre for Water Resources, College of Engineering.
6. Professor/Assistant Professor/Lecturer :	Division of Management, College of Engineering.,

Scales of Pay:

Professor : Rs. 4500-150-5700-200-7300.
Assistant Professor/Reader : Rs. 3700-125-4950-150-5700.
Lecturer : Rs. 2200-75-2800-100-4000.

D.A., H.R.A. and C.C.A. are as admissible.
Request for application forms will be entertained upto 23.11.92.
Last date for receipt of completed application is **29.11.92.**

REGISTRAR

ANDHRA PRADESH AGRICULTURAL UNIVERSITY
Admn. Office: Rajendranagar: Hyderabad-500030

CORRIGENDUM

In continuation of the Advertisement No.3/RC/92, dt. 21-9-1992 calling for applications for various faculty positions, it is hereby notified that the last date for receipt of applications for the posts mentioned in the revised advertisement is **25-11-1992.** Further the number of vacancies in respect of the following posts is as indicated below and not as published earlier in the Advertisement No. 3/RC/92. dt. 21-9-1992.

	No. of position
1. Agronomy (Professor cadre)	2
2. Soil Science & Ag. Chemistry (Professor cadre)	1
3. Mathematics & Statistics. (Asst. Prof. cadre)	2

The following vacancies are also notified for recruitment in addition to the vacancies already notified.

	No. of position
1. Chief Scientist (Professor cadre) (Agronomy/Soil Science & Ag. Chemistry).	1
2. Bio-Chemistry (Assoc. Prof. cadre)	1

P. BHASKARA PRASAD
REGISTRAR

MEERUT UNIVERSITY
MEERUT

Applications are invited for the post of a Lecturer in Statistics (temporary upto February. 28, 1993 likely to continue) in the grade of Rs. 2200-75-2800-100-4000. The application on prescribed form should reach the Registrar, Meerut University, Meerut-250005 latest by **Nov. 30, 1992.**

MINIMUM QUALIFICATIONS

(i) Consistently good academic record with atleast 55% marks or its equivalent grade in Master's degree, or an equivalent degree of a foreign university in the relevant subject.

NOTE : A candidate having obtained either an average of 55% marks in Bachelor degree and second class in Intermediate examination OR 50% marks in each of the two examinations separately, is said to have consistently good Academic Record.

(ii) Only those candidates who, besides fulfilling the minimum academic qualifications prescribed for the post of lecturer, have qualified in a comprehensive test, if any, to be conducted according to the scheme of the University Grants Commission, will be eligible for appointment as lecturer.

Provided that a candidate :-

(a) who has passed U.G.C., or C.S.I.R. or JRF examination,

(b) who has already been awarded Ph.D. of M.Phil. Degree, or

(c) who will be awarded M.Phil. degree upto December, 1990 or Ph.D. degree upto December, 1992.

shall not be required to qualify in such a comprehensive test.

NOTE :-Other things being equal preference will be given to the Scheduled Caste/Tribe candidates who are considered fit. Such candidates should attach certificate to that effect from the District Magistrate.

Prescribed application form can be obtained by sending a request to the Asstt. Registrar (Accounts), Meerut University, Meerut-250005 alongwith a self addressed envelope of size 23 x 10 Cms and stamped worth Rs. 10/- accompanied by a Bank Draft of Rs. 20/- in favour of the Finance Officer, Meerut University, Meerut or by Cash Payment of Rs. 20/- at the Cash Counter of the University. IPOs or MOs. are not acceptable. While requesting for application form please mention ~ Application for teaching post" on the envelope.

HAR PRAKASH
REGISTRAR

GURU NANAK DEV UNIVERSITY AMRITSAR

Advertisement No. 11/92

Applications are invited for the following posts on prescribed form obtainable at a price of Rs. 2/- from the office of the Registrar by making a written request accompanied by self addressed and stamped (Rs. 2.50) envelope of 23x10 cms. so as to reach this office by **30-11-92** alongwith crossed Indian Postal Order of Rs. 10/- for post/s at Sr. No.1 to 6 and Rs. 5/- for others (non-refundable) drawn in favour of the Registrar, Guru Nanak Dev University, Amritsar.

Persons already in employment must send the application through the employer. Candidates from within India may not be considered in absentia. Higher start in the grade may be given depending upon qualifications and experience.

The Vice-Chancellor may place before the Selection Committee the name of a suitable person for any post for consideration alongwith the applications received through advertisement.

The qualifications for the post of Professor and Reader will be those as prescribed by the University Grants Commission and approved by the State Govt. from time to time.

Generally, the minimum qualifications for appointment to the post of Lecturer shall be Master's degree in the relevant subject with not less than 55% marks or its equivalent grade and good academic record. The candidates must have qualified NET or JRF Test conducted by the UGC/CSIR or JPT or equivalent examination; but the candidates who are Ph.D. and those who have completed M.Phil. degree by 31.3.1991 are exempted from this test.

1. PROFESSOR (Grade Rs. 4500-7300):

BIOTECHNOLOGY (Genetic Engineering, Enzyme Technology, Tissue Culture, Immunobiotechnology or any other area of modern biotechnology) – 1

ENGLISH – 1

APPLIED PHYSICS (Microelectronics/ Material Science/ Solid State Physics) – 2

APPLIED CHEMISTRY (Pharmaceutical/Medicinal Chemistry, Pharmaceutical and Fine Chemical Technology, Chemical Engineering/Chemical Technology) – 2

2. READER (Grade Rs. 3700-5700):

HUMAN BIOLOGY & HUMAN GENETICS (Human Growth, Clinical Cytogenetics, Human Biochemical Genetics, Medical Genetics, Molecular Genetics, Population Studies or any other modern area of Human Biology & Human Genetics) – 1
PHYSICS (Any area in experimental/theoretical physics) – 1
MATHEMATICS (LEAVE VACANCY) – 1

TOWN & COUNTRY PLANNING – 1

MOLECULAR BIOLOGY & BIOCHEMISTRY (Protein Biochemistry/ Recombinant DNA Technology/Enzyme Technology/Tissue Culture/Immunobiotechnology/Physical Biochemistry) – 1 (temporary but likely to continue).

APPLIED CHEMISTRY (Pharmaceutical/Medicinal Chemistry, Pharmaceutical Technology, Chemical Engineering/ Chemical Technology, Food Technology) – 1

3. LECTURER (Grade Rs. 2200-4000):

PHYSICS (Solid earth Geophysics/Seismology/Remote Sensing) – 2; (Solar Energy/Photovoltaics/Experimental Physics) – 2 (temporary); (Any area in experimental/theoretical physics) – 1

B.TECH.PLANNING (B.Arch. or equivalent) – 1

MOLECULAR BIOLOGY & BIOCHEMISTRY (Protein Biochemistry/ Recombinant DNA Technology/Enzyme Technology/Tissue Culture/Immunobiotechnology/Physical Biochemistry)-1

PUNJABI (GNDU REGIONAL CENTRE JALANDHAR) – 1 (Ad hoc) (Madhya Kaleen Panjabi Sahit)

ENGLISH – 1

FRENCH – 1

ELECTRONICS TECHNOLOGY – 2

ARCHITECTURE – 2

PUNJAB SCHOOL OF ECONOMICS (COMPUTER APPLICATIONS) – 1 (M.A/M.Sc. Statistics or Mathematics with at least 55% marks alongwith MCA/Post-graduate Diploma in Computer Science and Applications/Post-graduate Diploma in Quantitative Economics and Computer Applications with at least 60 percent marks or equivalent grade point.

Nature of duties: Besides teaching Statistics/Mathematics and Computer Applications, the person is expected to help in Computer Work involved in M.Sc. (Hons. School), M.Phil. and Ph.D. dissertations of the students of Economics. Therefore, a thorough knowledge of statistical techniques and their programming is required).

4. RESEARCH ASSOCIATE (Rs. 2200-100-2700 fixed):

PHYSICS – 1

HUMAN BIOLOGY & HUMAN GENETICS – 1

5. RESEARCH FELLOW (Rs. 1800/- p.m. fixed):

ELECTRONICS TECHNOLOGY (Electronics and Communication/Computer Engg.) – 2

CHEMISTRY (Any field of Chemistry) – 3

6. RESEARCH FELLOW-CUM-DEMONSTRATOR (Rs. 1800/- p.m. fixed + Rs. 100/- Demonstration allowance)

CHEMISTRY (Any field of Chemistry) – 3
ZOOLOGY – 1

7. JUNIOR ENGINEER (ELECTRICAL)
(Grade Rs. 1800-3200)

8. TECHNICAL ASSISTANT
(DST PROJECT – EARTHQUAKE PREDICTION) (PHYSICS DEPTT.)
(Grade Rs. 1500-2640) – 1

9. TECHNICAL ASSISTANT GRADE V
(PHOTOMICROGRAPHY-BOTANICAL SCIENCES) (Grade Rs. 1500-2640) – 1

10. TECHNICAL ASSISTANT GRADE V
(SCIENTIFIC-CHEMISTRY DEPTT.)
(Grade Rs. 1500-2640) – 1 (temporary)

11. TECHNICAL ASSISTANT GRADE V
(ELECTRONICS-CHEMISTRY DEPTT.)
(Grade Rs. 1500-2640) – 1

12. TECHNICIAN GRADE II
(ELECTRONICS TECHNOLOGY)
(Grade Rs. 1200-2100)

13. TRAINEE OPERATOR (COMPUTER CENTRE) – 2 (One year apprenticeship)
(Rs. 800/- p.m. fixed)

14. STENO-TYPIST (PUNJABI)(Grade Rs. 1025-1800)

NOTE:

1. Candidates belonging to Scheduled Castes/Backward Classes of Punjab State when called for interview will be paid travelling allowance according to University rules.
2. Incomplete applications in any respect or without prescribed fee or received after the due date may not be entertained.
3. It is not obligatory to call every candidate for interview who fulfils the prescribed qualifications.
4. Copy of instructions, qualifications etc. for the posts will be supplied alongwith the application form.

DARSHAN SINGH
REGISTRAR

REGIONAL ENGINEERING COLLEGE: ROURKELA 769 008

Advertisement No.3/92
Dated 30.10.1992

Applications are invited in prescribed form (in duplicate) to fill up following posts.

Assistant Professor, Applied Electronics & Instrumentation Engineering (Instrumentation/Control System/Communication Engineering)

Scale Rs. 3700-125-4950-150-5700/-

Lecturer (a) Chemical Engineering &
(b) Mechanical Engineering

Scale : Rs.2200-75-2800-100-4000/-

For the above faculty positions, AICTE norms of qualification and experience as of University level Postgraduate Engineering College standard.

Registrar: Scale : Rs. 1100-50-1600/- (Un-revised)

QUALIFICATION & EXPERIENCE: A Bachelor's degree in Arts/Science/Commerce/Engineering/Technology with at least 10 years experience in responsible administrative post in any Government Department, University or an Academic Institution in a rank equivalent to that of Deputy Registrar of which at least five years should be in an Academic Engineering Institution.

Desirable: Good knowledge in Academic affairs and accounting procedure in an Engineering Institution.

Candidates abroad may apply on plain paper giving full bio-data & fees. Preference will be given to SC/ST/Physically handicapped candidates, who are otherwise considered qualified. Authorities reserve the right to make short listing of the applicants to be called for interview. Total monthly emoluments at the starting point at present are; Asst. Professor: Rs. 6185/-, Lecturer: Rs. 3762/- & Registrar Rs. 4116/-.

Further details regarding qualification, experience, specialisation, other benefits etc., prescribed for the posts and prescribed application forms will be available from the undersigned on payment of Rs. 100/- (Rs. 25/- in case of SC/ST candidates) in shape of crossed Bank Draft in favour of "Principal, Regional Engineering College, Rourkela", payable at State Bank of India, REC Campus Branch, Rourkela-8, enclosing a self addressed envelope (Size: 23cm x 10cm) with postage stamp of Rs.2/-.

The last date of receipt of completed applications is **30.11.1992.**

REGISTRAR I/C

ENGINEERING COLLEGE
KOTA

NO. ECK/Estt./92/8 **Dated : 24-10-92**

CORRIGENDUM

In continuation to this advertisement No. ECK/Estt./92/5, dated 20.07.92 the last date for the post of Professors is hereby extended upto **30.11.1992.**

PRINCIPAL

It Pays

to

Advertise

in

University News

INDIAN INSTITUTE OF PUBLIC ADMINISTRATION
INDRAPRASTHA ESTATE, RING ROAD
NEW DELHI 110 002

The Indian Institute of Public Administration, a National Institute for the study of Public Administration, engaged in undertaking research, consultancy and training programmes for civil services, invites applications for the post of a Librarian in the Institute in the pay scale of Rs.4500-150-5700-200-7300.

Prescribed form of application and details about age, qualifications, experience etc., can be obtained from the Registrar, free of charge, by sending a self-addressed envelope of the size of 25 cm x 10 cm.

Appointment may also be made on deputation. Qualifications/age relaxable in the case of exceptionally well qualified candidates. The Institute may also consider suitable candidates who might have not applied. The Institute reserves the right to fill or not to fill the post. Other things being equal, preference will be given to SC and ST candidates.

Candidates called for interview from outside Delhi will be re-imbursed actual 1st Class rail fare to and fro by the shortest route on production of ticket number. Completed applications in the prescribed form should reach the Registrar on or before **December 11, 1992.**

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BHARATHIDASAN INSTITUTE OF MANAGEMENT
TIRUCHIRAPALLI, TAMILNADU

ADMISSION TO
THE M.B.A. PROGRAMME 1993-95

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BIM is the first school of excellence established by Bharathidasan University, Tiruchirapalli. It also has the unique distinction of being the first Indian Business school to have a direct linkage with an Industry – the public sector giant – Bharat Heavy Electricals Limited. The campus and hostels are within the BHEL Campus providing direct access to BHEL's extensive facilities.

BIM's greatest strengths are the team of motivated students and a highly competent faculty consisting of outstanding academicians, some of India's best Managers and business leaders. The Institute lays great emphasis on academic excellence, which was amply demonstrated by our students winning the overall championship at the National Business Schools Meet conducted by IIM, Calcutta competing with the top Management Schools in the country.

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A well stocked Library and a 24 hour Computer centre complement the learning process. Frequent guest lectures from professionals in industry give a realistic focus on the course content.

PLACEMENT :

BIM has a record of 100% placements from the time of its inception. Every year large number of prestigious private and public sector companies visit the institute for campus recruitment.

TEST CENTRES :

Admission Test would be held on SUNDAY, JANUARY 31, 1993. Centres are at BANGALORE, BOMBAY, CALCUTTA, COCHIN, COIMBATORE, HYDERABAD, MADRAS, MADURAI, NEW DELHI and TIRUCHIRAPALLI.

ELIGIBILITY:

Applicants should hold a Bachelor's or a Post Graduate Degree in any discipline with a minimum of 50% marks. Final year degree students may also apply subject to the condition that they provide evidence of their completion with a minimum of 50% marks by July 31, 1993.

FOR PROSPECTUS & APPLICATION:

MAIL

(1) a typed self addressed slip (9 x 6 cms)

(2) a crossed bank DD for Rs. 150/- (Rs. 50/- for SC/ST Candidates if they produce the certificate) drawn from any Nationalised Bank in favour of "BHARATHIDASAN INSTITUTE OF MANAGEMENT, TIRUCHIRAPALLI" payable at TIRUCHIRAPALLI, towards application fee for admission test and interview. (Local applicants can obtain admission material across the counter at the BIM office by paying in Cash). No other mode of payment will be accepted.

To
Prof. Dr. N. Jayasankaran, Admission Co-ordinator,
Bharathidasan Institute of Management,
Post Box No. 12, E.T. Hostel, BHEL Complex, Tiruchirapalli-620014

Candidates successful in the admission test will be called for an interview during the last week of May 1993. Last date for accepting completed application forms is **JANUARY 10, 1993.**

BIM

SCHOOL OF EXCELLENCE

Published by SUTINDER SINGH, on behalf of the Association of Indian Universities, AIU House, 16 Kotla Marg, New Delhi-110002
Grams : ASINDU. Phones : 3310059, 3312305, 3312429, 3313390, 3323097 and 3712435. Telex : 31-66180 AIU IN
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ISSN – 0566-2257

University News

MONDAY, NOVEMBER 16, 1992

Rs. 5.00

Avinashilingam Institute Convocation

INSTITUTE FOR HOMESCIENCE
EDUCATION FOR WOMEN
UNIVERSITY
COIMBATORE

Smt. Sakunthala Subramaniam lighting the lamp to mark the opening of the convocation of the Avinashilingam Institute for Home Science and Higher Education for Women. On her left is Dr. Rajammal P. Devadas, Vice-Chancellor of the university. Others seen in the picture from L to R are Shri C. Subramaniam, Governor of Maharashtra & Chancellor and Dr. G. Ram Reddy, Chairman, UGC, who delivered the convocation address.

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In Press

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C.F.T.R.I., MYSORE

UNIVERSITY
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Opinions expressed in the articles are those of the contributors and do not necessarily reflect the policies of the Association.

Editor :
SUTINDER SINGH

On Cost-effectiveness and Accountability

Revised Programme of Action 1992

K .K. Bajaj*

Soon after adoption of National Policy on Education by the Parliament during its budget session of 1986, twenty three task forces were constituted on subjects ranging from early school to college education and research needs of diverse socio-cultural patterns and regions of the country, to suggest implementation strategies and financial implications for evolving a programme of action. These committees had on them eminent educational thinkers, social scientists, bureaucrats and economic experts to give the benefit of their expert advice towards the formulation of a programme of action which *inter alia* could make the system of education dynamic as never before. The recommendations of different task forces were consolidated and considered by Central Advisory Board of Education on 1st and 2nd August, 1986 whereafter the document called Programme of Action was approved by the Parliament in its monsoon session. This expressed the national resolve with broad strategies to implement National Policy on Education over a period of time even beyond the Eighth Plan. It was required to be followed with sensitivity and commitment because the New Education Policy, as never before, had been aimed to address the total educational needs of the country right from the pre-school requirements to the college and research level planning. It aimed to address and eradicate social illiteracy and go beyond scientific and technological education towards establishment of relevance in priorities through vocationalisation and removal of social gaps. To meet the challenge of obsolescence and ignorance, total reorientation of the content and process of school and college education was envisaged. Among the defined prerequisites, guiding principles and priorities for implementation strategies in higher education, consolidation and expansion of institutions, development of autonomous colleges, restructuring of courses, training and orientation of teachers, strengthening of research, mobility, creation of linkages between state and national levels, etc. were emphasised. But except in the matter of expansion of educational institutions, it has been the teacher who has remained as the most important functionary in the entire "Programme of Action". It has been through him that the total social change has been visualised.

Recently the National Policy on Education (1986) was reviewed by Shri N.Janardhana Reddy Committee (NPERC) and its recommendations were considered by the Central Advisory Board of Education at its forty-seventh meeting held on May 5-6, 1992. Reddy committee *inter alia* recommended revision of Programme of Action although it suggested that very little of policy required reformulation. Prior to this, Perspective Paper on Education towards an enlightened and human society by Acharya Ramamurti committee was submitted with its focus on as many as 26 issues with a deep concern for the principle of equity and social justice. It held that an integrated and holistic view of education be taken and the dichotomies such as of formal, nonformal and vocational education be removed. It focused on the school as the base of the educational pyramid for achieving universalisation of education, besides other measures to remove social disparities and ensure mass functional literacy. But now under the revised Programme of Action as recommended by Reddy Committee which was tabled in the Parliament on August 19, 1992, it has been emphasised that there is need for cost effectiveness and accountability at all levels

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of educational planning and administration in view of the resource constraints. Lack of availability of resources is evident from the AIU study based on the analysis of income and expenditure of eighty universities for the period 1984-85 to 1988-89 which has shown that over 98 percent of the universities suffered from financial deficits in different years; 45 percent of them had deficits for one to two years; 40 percent of them experienced budgetary deficits for 3 to 4 years and 12 percent of them suffered from perpetual deficits during all the five years of analysis. So, bad financial health is the common story of most of the universities. It is in this context that the present rethinking has become relevant. In fact both cost effectiveness and accountability are the basic issues in the system if it is to attain any degree of success in the context of our socio-economic milieu. Cost effectiveness is not merely an economic urgency to emphasise the optimal use of allocations and cutting down of infructuous expenditure on nonfunctional buildings and unsustainable inputs in non-viable institutions and activities. It is something more than that. Cost of education may not have absolute economic considerations as it is a social input which aims at creation of social base. At the same time cost factor has to be provided for the creation and consolidation of human resources. From the viewpoint of socio-economic analysis, education, which is merely a social responsibility function not directly linked to the improvement of social base and quality of life, cannot be sustained as a meaningful state exercise. Education is at best a function to improve the quality of life. The qualitative improvement of life is a coterminous function of education. From pre-primary level to post-doctoral standards, the aim of education is improvement of the self and thereby social behaviour even in a diverse society beset with inequitous pattern of opportunities for getting education. Needless to add that all educational institutions are sites for expansion of consciousness, thought, scientific outlook and national renewal. So their role is crucial to development. In this context the relevance of cost as an economic function cannot be ignored as no formal system without supporting economic base can survive. Without appropriate financial inputs no institution with howsoever ennobling a function to perform, can survive. In fact, in the university financial set up, it is only less than 2 percent of the total cost which is realised from tuition fee. Income from endowments varies from 0.07 to 0.28 percent and all else comes from central or state government funds. Even the research and industry linkages are negligible from this viewpoint. It is only in this context that there has been a near unanimous political and social consensus that education should have a committed expenditure to the extent of 6 percent of national income so as to bring it within the reach of one and all, irrespective of location and socio-economic barriers even though presently it continues to be felt "that absence of effective decentralisation, failure to evolve priorities and ineffective coordination, have adversely affected the performance of the education system".

A Management Function

While debate on the question of clarity on educational priorities, programmes and strategies continues, ensuring cost effectiveness is a management function. It entails deployment of fiscal inputs in coordination with available human material for optimum results. It aims at ensuring the acceptability and relevance of its products. In other words, if the costs are high and the products and neither acceptable nor relevant, the whole exercise goes awry and the system becomes questionable. Education is a human investment with multiple social functions and possibilities. If its costs are only of the type of an investment in the shape of a subsidy in a social system, it is bound to become counter-productive. It is therefore, imperative that the cost factor in the system in seriously taken into account and its different features analysed in terms of their net absorption rate and return. Even otherwise spending on education faces greater competition from other social security claims. Today it is highly subsidised yet the poorest have the least access to it. There has been a tremendous increase in the number of the our primary schools and institutions of higher education from 1950-51 onwards. Currently we have 5.58 lakh primary schools, over 7000 colleges, 199 universities including 27 deemed universities, 10 institutes of national importance, 5 IITs, and over 300 engineering and medical colleges. In the number of students seeking admission to higher education, the increase has been on an average, at the rate of about 10 percent over the last three decades, yet only about 6 percent of the country's population in the relevant age group is in higher education which is much less than that of many other developing countries. But with all this expansion Indian education system is catering only to about 8% of the youth population of the eligible age group, and leaving a vast 48% of our total population beyond its reach even though the number of students and teachers has also gone up phenomenally. National expenditure on education has also shown a distinct upward trend in our investment both by the centre and the state governments in this sector. Percentage of GNP spent on education has also increased from 1.2 in 1950-51 and 3.9 in 1986-87 to 3.5 in 1991- 92. Intersectorally the share of elementary education has decreased from 56% in I plan to 29% in VII Plan whereas share of university and general education has increased from 18% to 44% during this period. But the basic issue which has caused concern is whether the system has the desired social impact, and if not, why has it drawn a flak and as to what are the weak points in its planning and implementation. If there are schools, colleges and universities where there neither exists proper infrastructure such as classrooms, laboratories and playgrounds nor do they have teachers and these have not shown results, yet there are a significant number of other schools, colleges and universities in the country which have well built classrooms and other required infrastructure with teachers and research facilities and they too have not shown results. While the lack of performance on the part of the former could be explained there does not seem to be any reason why the inputs that have been available in the latter have also gone waste through results such as mass failures, organised copying, lack of excellence in sports, lack of research correlated to feasibility and inadequate teaching and lack luster performance of teachers. It is here that the accountability factor comes to the fore. It is in this context that the cost factor becomes prominent as its effectiveness is in doubt. There are schools, colleges and universities which have earned notoriety for their consistently poor or low performance and for a large number of areas of non-performance available in them. It is here that the costs and accountability factors become a matter of social audit. Non-performing institutions deserve to be given a show cause for remedial action including non-performing teachers. Serious undervaluation of teaching mandate has to be checked.

Non Performance of Teachers

Accountability means responsibility with preparedness to justify the action. Education is a sub system of the vast social system of the country. Its components are heterogeneous; its areas are uneven; its institutions are diverse; its clientele is culturally asymmetrical. So in our multi-layered social pyramid we have area specific disparities and demands which make the uniform application of accountability code difficult. But by and large accountability of the system is correlated to the performance of teachers and others whose products are required to establish their identity and relevance in society. There has been a phenomenal increase in the number of teachers in the system along with a codification of their qualifications, recruitment and training patterns. Whenever there has been a commission set up on education, right from Radhakrishnan commission onwards, the conditions of school, college and university teachers have been favourably recommended to be improved. They have been granted service benefits and security with proper scales and enhancement in social esteem. They deserved it all along. The present issue of accountability is a pointer towards the nagging non-performance of many of them which has failed to stem the rot and which indirectly has contributed to the pervading decline in the efficacy of the system. There have been repeated reports where at different levels the teachers have become indifferent and perhaps oversecure in the system to the extent of non-performance through lack of professional competition. While there have been internal checks and counter-check in the primary and high schools run by local bodies, minority managements and private groups, in the colleges and the universities the teachers are governed by the guidelines circulated by the UGC which has the statutory function to determine, coordinate and maintain standards of higher education. The UGC has brought out a number of such guidelines on affiliation, autonomous colleges, teachers' qualifications, teacher fellowships, minor and major research projects, faculty improvement, curriculum development, college development council, Academic Staff Colleges, State Council of higher education, seminars, participation in academic conferences, Schemes for SC/STs, etc. and more particularly to ensure availability of minimum number of 180 teaching days both in colleges and universities through an academic calendar but because of a strong inbuilt security system for the teachers, compelling local factors, presence of peer groups and growth of formidable unionism both among teachers and students, week cyclic examination system, karamcharis, etc. such a stipulated performance requirement is nowhere being fulfilled. For institutionalising the scheme of professional enhancement of inservice college and university teachers, the UGC has set up 46 Academic Staff Colleges. While many of these colleges have boldly undertaken the challenge of innovative work and responsibility and have inspired improvement in teaching, there are instances where stints in these colleges are undertaken by the teachers as only obligatory requirements to earn professional enhancement and which are no better than academic picnics and outings for them. Teaching, in fact now has to be a meaningful input and not merely an attention grabbing tactic or a routine function. The teachers have to imbibe the urge for learning rather than show seasonal concern towards students and scholarship. They all require to be sensitised towards this end and take their role seriously towards maintaining their relevance in the system of formal education. "Education for all" may be a democratic slogan but its relevance has to be correlated to excellence. To aim at this, the teachers have to be made accountable because it is through their accountability alone that the system will acquire legitimacy; otherwise the fatal circularity of the argument will continue to sap the success of the system with concentric groups of student, teachers and politicians holding each other responsible for its decline and failure all through.

Remedial Measures

In all government run or aided institutions of higher education and universities while there have to be a code of professional ethics and self appraisal scheme strictly to be followed by the teachers, performance indicators have also to be evolved and standardised so as to judge their performance objectively. It is high time their role in the system was understood more realistically and evaluated critically. The system which is over- protective to the extent of promoting indiscipline, lack of purpose, interest and relevance, calls for a review. Such social security measures as have made teachers or students subsidy-prone are required to be revamped, as in the context of the present resource crunch and year-on-year cuts these can no longer be allowed indefinitely. While the less interested students and those who want to learn at their own pace and convenience may be diverted to the non-formal stream of Distance Education, which too has to enlarge its area of operations despite its grudging acceptability, the teachers be also offered a great deal of contractual assignments and appointments in future along with pruning of inverted pyramids of administrative support system. Through better student support services, mobility between conventional and open university system, and use of educational technology, the reach of Distance Education has to be extended to all sections of society particularly those who have missed the advantages of formal education and are even otherwise economically handicapped or socially not well placed to afford joining colleges and universities. Since Distance Education is less expensive, the present number of 5 Open Universities, 37 universities and 4 Deemed Universities offering education through correspondence should be increased substantially to cope with the emerging demand to accommodate the overflow of students in formal education. Distance Education should have special area specific academic packages and centres in each of the ten educationally backward states. It should offer more viable alternative modules to ease pressure on formal courses in college and universities. For all this a strong network of open universities in the country is required to be set up. There is no justification for opening of nonviable colleges which have inadequate enrolment year after year and which stammer for survival and are a drag on the system. Their existence damages the total credibility of the system as they are no better than parking places for idle youth and have simply the dubious distinction of being called academic institutions. They breed frustration and indiscipline. At the university level where teaching should be assigned high priority, indiscipline both among students and teachers has to be curbed. With these new watchwords, it should be a period of consolidation through funding for quality and efficiency with yearly assessment of teaching and research effort to promote teaching and scholarly leadership to affirm academic standards. Education is a serious activity. Its goals are distinct so its inputs cannot be half-hearted, vague and hazy. If the human resource development is important as a social responsibility function of the government with limited resources it is equally important that these limited resources are not wasted in a system which may promote profligacy and where there is neither cost effectiveness nor accountability. In fact a viable financial base alone is capable of building modern higher education system which would be both efficient and equitable. This strength will be possible only through cost effectiveness of our sparse resources ploughed in education and through the accountability which it will evoke in the exercise. This alone will make the colleges and universities centres of academic excellence rather than costly outfits of youth in indiscipline and forums of teachers who rarely perform the functions of nation building. So if the present crisis and decline in education is to be checked the system has to be given a fresh lease of life through making it work more effectively and through cultivation of an ethos of accountability with quiet efficiency in our educational institutions. Despite the working Group on Resources for Education (including Art and Culture, Youth Affairs and Sports) for Eighth Five Year Plan having recommended that Eighth Plan (1990-95) outlays should be Rs. 45,000 crores along with several measures to mobilise additional resources for education through non-budgetary sources also, the resource crunch is obvious and acute. For aided institutions the element of competition may come to be introduced whereby better performing educational institutions may draw better grants on improved terms. So the emphasis on cost effectiveness and accountability gets more prominent and plausible in the system to sustain it in the days to come. Even a mandatory mechanism for periodic evaluation through duly constituted Accreditation Council at the national level to assure standards of performance may be required. This is necessary also to enforce discipline and accountability in the system.

References

(i) National Policy on Education-1986, Ministry of Human Resource Development, Government of India (Department of Education), New Delhi, May 1986.

(ii) National Policy on Education-1986, Programme of Action, Ministry of Human Resource Development, Government of India (Department of Education), New Delhi, Aug. 1986.

(iii) Towards an Enlightened and Humane Society, NPE 1986 – A Review (Report of Acharya Ramamurti Committee for the review of National Policy on Education 1986), 26th Dec. 1990.

(iv) Annual Report for the year 1988-89, UGC, New Delhi.

(v) National Policy on Education (NPE) 1986, Revised Policy Formulation, CABE, May 1992, New Delhi.

(vi) Draft Proceedings of the Central Advisory Board of Education, Forty Seventh Meeting, May 5-6, 1992.

(vii) Developments in Education since formulation of National Policy on Education (NPE), 1986 which have a bearing on Policy, CABE; May, 1992, New Delhi.

(viii) Shri N. Janardhana Reddy Committee, Report (NPERC), March, 1992, New Delhi.

(ix) Draft Memorandum submitted to the Hon'ble Minister for Finance, Government of India, on Funding of Universities by the Association of Indian Universities, Aug 1992, New Delhi.

(x) Ghosh, Arun, Education for All - The Financing Problem: Economic and Political Weekly, April 4, 1992.

(xi) Studies on Teachers in Higher Education General Editors; Moonis Raza, G. D. Sharma, Shakti Ahmed, Central Technical Unit, National Commission on Teachers (Higher Education), NIEPA, New Delhi.

EDUCATIONAL MEDIA IN INDIA

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There are a large number of educational media, such as, print, projected, radio, video, TV, and Computers used in India. All these media are unique with respect to some attributes, whereas common with respect to others. The focus of the present paper are the three educational media namely, radio, TV, and computers. Radio is a very powerful, almost universal, medium to carry audio stimuli. TV can reproduce, rather carry, real life events with all immediacy, recency, and omnipresence and to a large size of viewers simultaneously irrespective of their geographical locations, generating electronic and optical effects. Computers can readily simulate varied phenomena/events. The learner can interact with the computer software individually through own pace. Also, computers facilitate quick random access.

There is quite an expanded radio network in India but its focus is more on entertainment and information than instruction. Moreover, with the advent of Educational Television (ETV), Educational Radio seems to be alienated and neglected. Educational Radio programmes are little utilised in our country. One of the causes is that most of the electronic media are not properly rooted in Indian soil. It is high time that they are generated, conditioned, and cultured natively. Another cause is that media, such as, Radio, TV, and computers all have their isolated networks. There is very little internetting. There is a need to discriminate properly whether a message is radio-genic, TV-genic, or computer-genic. For valid discrimination there is a need to comprehend the attributes of these media, both unique and common.

Radio is a very powerful auditory medium which can evoke imagination. A variety of subjects demanding audio stimuli can be radio mediated through a suitable format, such as, illustrated talk, drama, feature, dialogue, discussion, question-answer, quiz, interviews, etc., right from infants though aged.

Similarly, TV is a very strong audio-visual feasible medium whose effectiveness for purveying a variety of audio-visual stimuli is quite established. TV though an audio-visual medium has to have more of substance in the form of video material, wherein, the audio stimuli should usually not exceed 25% of the total stimuli. The nature of a TV programme has to be such that it cuts across multi-level, multi-cultural, multi-lingual masses. ETV also can go to different age levels on a variety of subjects, through varied formats.

Computers too, is a very powerful instructional medium. It can present a wide variety of stimuli through graphics, text, colours, and sound in a most friendly manner. Animation makes the learning material quite interesting. Moreover, computers can present a variety of subjects interactively.

It has been found that same subject matter has been treated through different media indiscriminately. Why should TV be loaded with what can be easily carried through radio? Why should such messages be beamed through radio which demand video stimuli? Why should those pictures be generated through computers where objects can be easily exposed to camera? Should there not be suitable media-identification, media-mix, media-coordination, and media-integration? The focus of the present paper is Educational Media Culture in India. An attempt has been made to present Educational Radio, TV, and Computers.

Educational Radio in India

Radio broadcasts were started in India at Madras by the Madras Presidency Radio Club on July 31, 1924. Indian Broadcasting Company started Radio Broadcasts from Bombay in 1927. Broadcasting was then taken over by the Government of India and operated in the name of Indian State Broadcasting Service. Since July 8, 1936 it is known as All India Radio (AIR).

In India, regular broadcasts for school children (Schools Broadcasts) were begun at Calcutta station of All India Radio (AIR) from November, 1937. The Central Institute of English and Foreign Languages (CIEFL), Hyderabad is producing primary and secondary series on English language, which are broadcast by different stations of AIR. There are broadcasts for university students which are of two kinds. One is general enrichment service which is mainly a part of the Youth Programme. The other is a special service of radio support to correspondence education for B.A./B.Com. degree courses of universities, namely, Delhi, Madras, Panjab, and Punjabi, etc. Thirteen stations of AIR are broadcasting programmes for National Adult Education Programme launched in India from October 2, 1978. A few stations of AIR, such as, Bhopal and Tiruchi are giving Non-formal Education Broadcasts for children (9-14 age group).

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Sporadic efforts have been made to study different aspects of educational broadcasts at different levels looking into utilisation of radio lessons with reference to varied educational systems having different learner characteristics, scheduling of educational programmes, etc.

Effectiveness of Educational Broadcasts

Four studies on school broadcasts conducted by the Centre for Educational Technology (CET, now known as CIET i.e. Central Institute of Educational Technology), National Council of Educational Research and Training (NCERT), New Delhi in Jaipur, Jalgaon, Delhi and three districts of Tamilnadu have brought out a rather dismal picture in this respect. The studies amply showed that merely beaming school broadcasts or keeping radio sets in schools is not a guarantee in itself that children would benefit from them. Monitoring of utilisation and continued effort to meet the needs of the audiences is equally important.

Sudame & Goel, (1978-79) studied the school broadcasts for primary schools in Andhra Pradesh and found that the school broadcast programmes are nicely utilised in Andhra Pradesh, particularly, in primary schools. Everybody is taking interest in these programmes. Teachers and Heads bring their own sets in the schools. Villagers are taking keen interest in providing listening facilities to the schools. If a few of their problems are taken care of, these programmes can be utilised in still better ways.

Biswal (1980) has studied the utilisation of SBPs (School broadcast programmes) in the State of Orissa. He reports that a large percentage (86 to 90) of schools owned radio sets which had been obtained through grants, donations, gifts, audio-visual funds, children's welfare funds, etc. But there were many hazards for the effective utilisation of the sets in schools, namely, lack of accessories like extension speakers, lack of proper accommodation for listening sessions, power failure, lack of servicing facilities, etc.

Goel (1982) studied twenty one radio stations spread over all states except Orissa and Nagaland for the production and transmission of SBPs and forty nine secondary schools in Haryana and fifty one primary schools in Andhra Pradesh for their utilisation. The study reveals that the AIR stations were understaffed. Also it reveals that most of the producers were untrained. Because of this reason the quality of programmes got affected e.g., selection of topics was very unsystematic and they were not properly sequenced. The coordination between AIR and other institutions like NCERT, SIEs(State Institutes of Education), CIEFL, Hyderabad, H.M. Patel Institutes of English, Vallabh Vidyanagar, etc. was not very effective.

Soni (1985) studied the school broadcasts in the schools of Indore city. None of the schools was found utilising school broadcast programmes. Different reasons identified for non-utilisation of the programmes were non-availability of radio sets, inadequate electric connections, lack of resources, temporal rigidity and inadequate relation to syllabus.

Sudame & Goel (1988) conducted a study of school broadcasts in Baroda district. The study carried out during 1983-85 mainly aimed at finding out the level of utilisation of school broadcast programmes in secondary schools in Baroda district and the factors encouraging or impeding utilisation of SBPs. The production of SBPs and their quality and relevance to the school syllabi were also studied. The findings of the study clearly show that school broadcast programmes have hardly any place in teaching in secondary schools. The teachers and students in Baroda district would not have missed the radio lessons, if for some reasons they were discontinued abruptly.

Radio-cum-correspondence In-service Teacher Training Programmes

There have been great changes in content and methodology of instruction. New dimensions in the contents of subjects like Mathematics, Science, and Social Studies and consequently new approaches in treating them have been and are being evolved. Teachers are to be oriented to these changes. Hence many stations of AIR are now beaming special programmes for teachers.

Radio-cum-correspondence in-service teacher training programmes are organised in five States for training teachers in various subjects at school level. The Government of Kerala in collaboration with AIR, Trivandrum started a radio-cum-correspondence in-service teacher training programme in 1975. Similarly, 'Teach English' programmes for primary school teachers were started by AIR, Ahmedabad in 1976 in collaboration with SIE, Ahmedabad, and H.M. Patel Institute of English, Vidyanagar. Based on suggestions from working teachers, these institutions have started the 'Learn English' programmes for school students. The joint effort made by H.M. Patel Institute of English, SIE and AIR has considerably systematised the school broadcasts in English to the extent that script writers are properly oriented, lessons are synchronised and sequenced with the school lessons, listeners are given guidance in advance, and feedback obtained from user teachers based on which they improve their programmes. Gauhati started these programmes in May 1978. They broadcast one programme per week on teaching of Science in primary schools. AIR Madras started these programmes in October, 1978. They broadcast two programmes in a month on various subjects, such as, Mathematics, Science, History, Geography, Educational Technology, instructional aids, assignment and homework, evaluation. AIR Pune started these programmes in 1978. They broadcast these programmes during the summer vacation, giving support to the correspondence course for untrained primary teachers conducted by the State Department of Education.

A pilot project was started in Kerala in November, 1975 in Science for standard VI teachers. In addition to this a survey was conducted by the Audience Research Unit of All India Radio, Trivandrum. The success of the pilot project led to extending this course to three other groups of teachers in three subjects, Mathematics for primary teachers, Science for standard VII teachers, and Malyalam for standard V teachers.

Educational Television in India

The first television centre in India was set up in Delhi on experimental basis in Sept. 1959 as a part of All India Radio. With the expansion of television network, education programmes were introduced in Bombay, Madras and Srinagar by mid-seventies. The ETV programmes for children produced by CIET of the NCERT are telecast through INSAT-1D for children of age range (5-8) years and (9-11) years from Monday through Friday and for school teachers on Saturdays. These programmes are telecast in different States, namely, Maharashtra, Andhra Pradesh, Orissa, UP, Bihar, Gujarat and MP. CIET of the NCERT New Delhi is producing Massive Teacher Education ETV programmes for the orientation of in-service teachers, which are telecast during summer vacation. The School Television (STV) programmes for children are televised by DDK (Doordarshan Kendra) Delhi, Bombay and Madras.

DDK Srinagar is telecasting one programme for the university students per week which is enrichment type. DDK Bombay and DDK Pune are telecasting programmes for the adults, such as, '*Gyandeep*', '*Chauraha*'.

The UGC sponsored Countrywide Classroom programme (CWCR) for university students has been telecast since 15th Aug. 1984 on all working days from 1:00 p.m. to 2:00 p.m. and 4:00 to 5:00 p.m. in its direct mode. To study the effectiveness of CWCR programme in its interactive mode, the ISRO, UGC talk-back experiment in India was conducted from 25th Nov. to 30th Nov., 1991. Later on such a system can become an operational system. Eight centres were selected for talk-back. Two of these centres, namely, Jodhpur and Imphal – were linked with the studios at Delhi through satellite INSAT-1D, whereas the remaining six centres were linked through the public switching telephone network. The IGNOU ETV programme is telecast by the Indira Gandhi National Open University since 20th May, 1991.

Effectiveness of Educational Television

It is evident through the studies conducted by Jaiswal, K., (1988) and Doneriya, A., (1988) that the content and presentation of the Science ETV and General ETV programmes for children were quite suitable with respect to most of the dimensions.

Sudame and Goel (1984) conducted a study on the Utilisation of School Television (STV) programmes in five schools of Greater Bombay. It was found that the STV programme viewing facilities in most of the schools were inadequate. There was a problem of multi-sections in a standard. None of the schools was found to have more than one TV set. The school teachers were not trained in using STV programmes for classroom instruction. Pre-and Post-telecast activities were not carried out by them. The STV programmes on Science were in Marathi only which did not suit the multi-lingual population of cities like Bombay. The STV programmes in English were found much below the levels of English medium students. Even then the programmes on Science could be well utilised by the Marathi medium schools. The programmes on English could be utilised by the non-English media schools.

Jaiswal, K. (1988), found that UGC CWCR Science ETV programmes were equally effective for Hindi & English medium students and quite suitable in most of the dimensions. Doneriya, A., (1988) found that the gain through the general ETV programmes was significant. There was no significant difference in the effectiveness of Indian and imported programmes.

The study conducted by Jaiswal, K., (1991) on ETV reveals that CWCR programmes are quite useful but there is ample scope for adaption, correction, and perfection. The programmes should be such that they are meaningful to multi-lingual, multi-cultural, multi-level undergraduate population of India. The 98% of the CWCR Science ETV programmes on Biology, Chemistry, Physics, Computers and General Science were found effective for students. 30% of the programmes were equally effective for English and Hindi medium students, 60% were effective in favour of English medium students and remaining 10% programmes were effective in favour of Hindi medium students.

Goel & Jaiswal (1991), conducted a study on IGNOU ETV and found that these programmes are quite effective, but still there is a scope for improving upon the contents, quality, and presentation style of these programmes. The IGNOU ETV programmes are quite appreciable and appealing. So the frequency of the IGNOU ETV programmes may be increased.

Two studies were conducted under the simulated conditions of talk-back and interactive modes of CWCR. It is supplemented through research evidence that the gain in three programmes out of ten was significant through the Countrywide Classroom with talk-back. However the mean achievement of the talk-back group in three programmes out of seven was higher than that of without talk-back, though not significantly

(*Namita Sahoo*, 1991). Similarly it was found that the Countrywide Classroom programmes were highly effective with talk-back in comparison to without talk-back with respect to Concept Attainment Model (selection strategy) and Advance Organiser Model. Similarly the mean achievement with interaction was found significantly higher than the mean achievement without talk-back in case of the Advance Organiser Model. The programmes were highly effective with interaction in comparison with talk-back in case of Syntactics and Concept Attainment Model (selection strategy). (*B.B. Singh*, 1991)

It is evident through the study carried out by Goel & Jaiswal (1991) that the ISRO-UGC CWCR talk-back experiment was conducted reasonably well. The questions raised by different viewing centres were subject centered, well structured, sharp focused and well moderated. The viewing centres could have rehearsed on how to control the speaker while putting questions so as to avoid feedback by the speakers. Most of the questions were treated by the experts except those which were either not audible or where it was necessary to avoid. There was optimum coordination between the Scripter and Delhi based Subject Expert except in a few programmes like "*Kiradu – an Oasis in the desert*". A large majority of the experts were very prompt, analytical, economic, precise, and intelligible while responding. It would have been excellent if the subject experts could be oriented on the skills of responding. There was a need to orient the scripter and Delhi based expert with respect to their relative roles. All the responses of the experts to the talk-back questions were in the audio form. Perhaps the audio responses could be supplemented through the video stimuli. The Countrywide Classroom Programme with Talk-Back is quite desirable and reasonably feasible.

Dibakar (1992) conducted a study to find out the comparative effectiveness of IGNOU ETV programmes in direct, talk-back and interactive modes. Out of the 7 IGNOU ETV programmes, 6 indirect and talk-back and all in interactive mode showed significant gain in achievement from pre-test to post-test. In 4 out of 7 IGNOU ETV programmes interactive mode was found more effective than talk-back and direct mode. Among the 3 telemodes interactive was found more effective than the other 2.

Educational Computers in India

The introduction of CLASS (Computer Literacy and Studies in Schools) project in July 1984 has brought a new culture in School Education. To facilitate the application of computers in education, The School of Education (SOE), Devi Ahilya Vishwavidyalaya (DAVV), Indore has instituted a Diploma programme, in Computer Education (D.C.Ed) since July, 1989. It is a 60 credits full time regular programme constituted of Fundamentals of Computers, Database Management in Education, CAI through BASIC, System Analysis and Design in Education, PASCAL, Application of Software Packages in Education, and a Project. The D.C.Ed. students since July, 1989 have developed Computer software for instruction, such as, Periodic Table and Chemical Bonding, Optics, Thermodynamics, Mensuration, Set Theory, Logic Gates, Magnetism, Electricity, Accountancy, Properties of Matter, Solar System, Nuclear Chemistry, TV Circuitry, Geometry, Computer Network, Computer Communication Methods, Satellites, Vitamins, etc. Also, they have developed computer software on Fundamentals of Computers, BASIC, Result processing, Payroll, personnel profile, library management, lab. management, and Hindi Text Editor.

The packages mentioned above can be utilised as if is by various educational institutions. The packages are readily available at the Institute of Education, DAVV, Indore.

Similarly, the SOE, DAVV, Indore has institutionalised a programme, Master of Computer Education since July 1992. It is a two year part time programme constituted of C language, UNIX and DOS, Educational Management through CLIPPER DBASE, Information Technology in Education, Application of Software Packages in Education and two Projects. Some studies have been carried out in the area of Computer Education.

Sangeeta, (1989) carried out a study on Development of Computer Based Internal Evaluation Data Processing Software. It was found that the data processing through the developed software was comparatively more efficient, accurate and reliable.

Beryah, P. (1989) carried out a study on Development of Computer Based Library Management System Software. The computer based library management system developed was found to be quite feasible and practicable. Another attempt was made (*Beryah*, 1990) to develop Computer Based Library Management Software in CLIPPER DBASE and to implement in the SOE, DAVV, Indore Library and study its efficacy at the field level. This software package which was developed through CLIPPER DBASE was found to be more comprehensive and the response time was much less and quite reasonable as compared to the package developed by Beryah, 1989 through DBASE-III +. The system has been found quite feasible, technically, economically, legally, operationally and schedulewise.

Prabhakar (1989) developed Software for Computer Aided Instruction (CAI) and its comparison with Traditional method for teaching semiconductors at +2 level. The CAI was found to be effective in terms of achievement of students belonging to class XI and XII. Also it was found to be effective in terms of reactions of students belonging to class XI and XII. The CAI was found to teach semiconductor topic equally well to both classes XI and XII students, when pre-test was considered as co-variate. The same results were obtained when intelligence was considered as co-variate. The CAI material was found to be significantly superior to the traditional method but no significant difference was observed when groups were matched with respect to intelligence. The sex didn't influence effect of interaction between treatment and sex on achievement. Both classes XI and XII students were found to have equally favourable reaction towards CAI material when the groups were matched with respect to pre-tests.

Mohanty, Gayatri (1989) conducted a study – Developing Educational Implication of Research Findings in the area of Creativity in Indian Scene. The findings were reviewed from the related research studies. They were content analysed taking frequency into consideration by voting method. Research synthesis emphasised on three main aspects like (1) Summarising findings across studies, (2) Accessing the consistency of findings, (3) Resolving contradictory findings. The findings revealed that creativity was a multifactor construct which included 4 main factors, namely, fluency, flexibility, originality and elaboration. The study concluded that in order to save and develop talent not only the school programmes need modification but writers, parent and administrators have also to be overhauled with a view to stimulate the potentialities of the teachers who would further be helpful to the creative child.

Jawade, Chetna (1990) conducted a study – Preparation of Database of Research Studies in School of Education and its Implications in Educational Technology. An attempt was made to synthesise the research findings of educational technology in India and to work out educational implications of conclusive findings in the area of educational technology. All the doctoral and project studies in educational technology in India were covered. The findings were reviewed from the related research studies. They were content analysed taking frequency into consideration which helped the researcher in making the qualitative and quantitative tables by voting method. Similarly the investigator tried to synthesise findings on various other dimensions of ET and also the implications had been worked out.

Himani (1990) conducted a study – Development of Computer Aided Instructional Material on Microbes for class VIII. The developed CAI material proved quite effective which was evident through the significant gain of the students. Also the students were found to have positive reactions towards the CAI.

Mishra, Renu (1990) developed Computer Based Evaluation Software on ET for M.Ed. The computer based evaluation was found quite objective, accurate, valid, reliable and comprehensive. The non-English media students faced difficulties responding in English medium through computers. The students were found to have positive reactions towards computer based evaluation. However limited number of computers was found to be a limited factor in testing a large number of students.

Goel & Sanjay (1991) conducted a study – Development of Computer Based Question Bank Software for Selection into Computer Education. A computer based question bank was developed by the investigators on areas, namely, logical reasoning, arithmetic ability, English language ability, general awareness, and data interpretation. Science group scored significantly higher than Art group in computer entrance test when pre-B.Ed. entrance test was considered as co-variate. Males and females did not differ significantly on achievement in computer entrance test when pre-B.Ed. entrance test was considered as co-variate. Maths and non-Maths groups did not differ significantly on achievement in computer education when pre-B.Ed. entrance test was considered as co-variate.

Mishra (1990) is developing computer software for selection of teacher trainees. Beryah, P. (1991) is carrying out her doctoral work at the School of Education, DAVV, Indore on designing, developing, and implementing Computer Based Learning Resources Management System. Her package developed at the present level is being used for managing different libraries of the DAVV, namely, SOE library, School of Energy Studies Library, etc. Also, attempts are being made to computerise the central library of DAVV, Indore through her package. Biswal (1991) is carrying out his doctoral work on Development of Computer Based Time-Space-Personnel Management system for educational institutions. Jawade (1991) is carrying out her doctoral work on synthesising research findings in educational technology through database and their educational implications. Mahapatra (1992) is developing software package for teaching Chemistry to class IX students of M.P. State. Goel & Jaiswal (1991) developed computer software for Flanders Quantitative Interaction Analysis for teacher training institutions.

Mahapatra, Bhuban Chandra (1991) conducted a study Development and Effectiveness of Computer Aided Instruction in terms of Achievement and Abstract Reasoning of class IX students. The developed CAI was found to be significantly superior to traditional method when the students mean achievement scores were adjusted with respect to intelligence. The CAI was not found superior to traditional method when mean adjusted reasoning scores were adjusted with respect to intelligence. There was found no significant difference in respect of the extrovert and introvert students towards CAI except on three aspects of CAI, namely, (1) The subject matter on structure of atom and chemical bonding was at a suitable level, (2) There was enough interaction between students and computer, and (3) The method used was well integrated with the subject matter.

Adhikari, Rajshree (1992) conducted a study – Development of Computer Aided Instructional Material on Cell and Cell Reproduction for class IX. The computer aided instructional material was found to be effective in terms of achievement of students. Also, the CAI was found effective when both groups were matched on intelligence. The students showed positive reactions towards the CAI.

Goel & Mishra (1992) conducted a study – Development of Computer Based Software for Testing Teaching Aptitude. They attempted to study the teaching aptitude of the B.Ed. trainees (1991) at the SOE, DAVV, Indore disciplinewise, sexwise, mediumwise, and habitatwise through a computer software developed by them for testing teaching aptitude. It was found that science graduates had higher teaching aptitude than the art graduates. Girls had higher teaching aptitute than boys. Mediumwise and habitatwise that students could not be discriminated on teaching aptitude. Also it was found that the computer software for testing teaching aptitude was quite correlating with the VPP Mandal teaching aptitude test. The fidelity of the computer software for testing teaching aptitude was found quite high.

Goel & Mishra (1992) developed Computer Software for Testing Social Sensitivity of the B.Ed. trainees (1991) at the SOE, DAVV, Indore disciplinewise, sexwise, and mediumwise and the correlation between social sensitivity and teaching aptitude. The software was developed through Basica and CLIPPER DBASE. It was found that the social sensitivity as a quality of teacher did not depend upon discipline, medium and sex. The study also revealed that it was not necessary that a teacher who had high teaching aptitude should also have high social sensitivity.

Concluding Remarks

It is really heartening to note that different levels and forms of technology coexist reasonably harmoniously in India. The relative roles of different media need to be enunciated, refreshed, redefined, and understood more comprehensively. For suitable media-coordination and media-mix it is necessary that different media agencies and users, such as, AIR, CIEFL Hyderabad, Doordarshan, EMRCs, AVRCs, CIET, IIMC, FTII, and IGNOU etc. have intercommunication.

In India communication through radio and TV is mostly one way. The radio and TV programmes may not always be self contained. So, there is a need to communicate through radio and TV in two way (Talk-Back/Interactive Modes). Educational TV has been tried at experimental level in talk-back mode in India during Nov., 1991. The experimental results reveal that ETV can mediate more effectively through talk-back. Similarly Educational radio can also realise interactive and talk-back modes. Computer networks at local, national, and global levels through point to point and broadcast channels can facilitate intercommunication among various agencies and individuals.

There is an immediate need to intermix and integrate various educational media. Some attempts have been made to integrate video and computers in the form of interactive video, wherein, there can be computer selected and controlled video presentation. Similarly the desired output of computers can be transferred to video tapes mixing suitably with video stimulti. Also, there is a need to have modular approach to educational media, mixing media, such as, radio, TV, computers, OHP, print strategically. Also, there should be ample inter-communication amongst different media agencies.

References

Adhikari, R., "Development of Computer Aided Instructional Material on Cell Reproduction for Class IX", M.Ed. dissertation, SOE, DAVV, Indore, 1992.

Beryah, P., "Development of Computer Based Library Management System Software", M.Ed. dissertation, SOE, DAVV, Indore, 1989.

Beryah, P., "Designing and Implementing Computer Based Library Management System", M.Phil. dissertation, SOE, DAVV, Indore, 1990.

Beryah, P., Designing, Developing and Implementing Computer Based Learning Resources Management System", an ongoing doctoral work, SOE, DAVV, Indore, 1989.

Bhardwaj, H., "Development of Computer Aided Instructional Material on Microbes for Class VIII", M.Ed. dissertation, SOE, DAVV, Indore, 1990.

Biswal, A., "Development of Computer Based Time-Space-Personnel Management System for Educational Institutions", an ongoing doctoral work, SOE, DAVV, Indore, 1991.

Dibakar, S., "A Study of the IGNOU ETV Programmes in terms of their effectiveness through Direct, Simulated Talk-back, and Interactive Modes", M.Phil. dissertation, SOE, DAVV, Indore, 1992.

Doneriya, A., "A study of General Educational Television Programme in terms of their Contents, Presentation, Students' Reactions and Effectiveness", M.Ed. dissertation, SOE, DAVV, Indore, 1988.

Goel, D.R., "A study of school broadcasts in India", Unpublished Ph.D. Thesis, CASE, M.S. University of Baroda, 1982.

Goel, D.R., "Educational Television In India: Organisation and Utilisation", a Post-doctoral thesis, CASE, MSU, Baroda, 1984.

Goel, D.R. & Jaiswal K., "IGNOU ETV : Pedagogical Analysis", **University News,** Dec. 30, 1991.

Goel, D.R. & Jaiswal K., "ISRO UGC Talk-Back Experiment in **India", University News,** Jan. 27, 1992.

Goel, D.R. & Mishra, Renu : "Development of Computer Based Software for Testing Teaching Aptitude", **University News**, June 22, 1992.

Goel, D.R. & Mishra, Renu : "Development of Computer based Software for Testing Social Sensitivity", **Research Bulletin, Maharashtra State Council of Educational Research and Training**, Vol. 21, March-June, 1991.

IGNOU, New Delhi, "IGNOU Telecasts Programmes", **University News** ,May 27, 1991, p.17.

Jaiswal, K., "A study of Science Educational Television Programme in terms of their Contents, Presentation, Students' Reactions and Effectiveness", M.Ed. dissertation, SOE, DAVV, Indore, 1988.

Jaiswal, K., "A Study of Higher Education Science Educational Television Programmes in terms of their Contents, Presentation, Students' Reactions and Effectiveness", Unpublished Ph.D. thesis, SOE, Centre of Excellence, DAVV, 1991.

Jawade, C., "Preparation of Database of Research Studies in School of Education and its Implications in Educational Technology", M.Phil. dissertation, SOE, DAVV, Indore, 1990.

Jawade, C., "Synthesising Research Findings in Educational Technology through Database and their Educational Implications", – an ongoing doctoral work, SOE, DAVV, Indore, 1991.

Mahajan, S., "Development of Computer Software for Automation of the Diploma Course in Computer Education", a doctoral thesis submitted to the DAVV, Indore, 1991.

Mahapatra, B., "Development and Effectiveness of Computer Aided Instruction in terms of Achievement and Abstract Reasoning of Class IX Students". M.Ed. dissertation, SOE, DAVV, Indore, 1991.

Mahapatra, B., "Development of Software Package for Teaching Chemistry to Class IX Students of M.P. State", – an ongoing doctoral work, SOE, DAVV, Indore, 1992.

Mishra, R., "Development of Computer Based Evaluation Software on E.T. for M.Ed. ", M.Ed. dissertation, SOE, DAVV, Indore, 1990.

Mishra, R., "Development of Computer Based Software for Selection of Teacher Trainees" – an ongoing doctoral work, SOE, DAVV, Indore, 1990.

Mohanty, G., "Developing Educational Implication of Research Findings in the Area of Creativity in Indian Scene", an M.Phil. dissertation, SOE, DAVV, Indore, 1989.

Prabhakar, S., "Development of Software for Computer Aided Instruction and its Comparison with Traditional Method for Teaching Semi-conductors at Plus II Level"' M.Ed. dissertation, SOE, DAVV, Indore, 1989.

Shukla, S., "Development of Computer Based Internal Evaluation Data Processing Software", M.Ed. dissertation, SOE, DAVV, Indore, 1989.

Soni, S., "A study of school broadcasts in Indore city", Unpublished M.Ed. dissertation, SOE, DAVV, Indore, 1985.

Sudame, G.R. & Goel, D.R., "A study of school broadcasts in Baroda district", NCERT project, CASE, M.S. University of Baroda. 1988.

IGNOU

CORRIGENDUM

Ref. Adv. No. 7/Rectt/92, published on page 29 of 2nd November Issue of University News, inviting applications for various posts in the IGNOU. The post appearing at Sl. no. 5 may be read as DEPUTY REGISTRAR instead of DEPUTY DIRECTOR.

Placement Dynamics of Forestry Managers

Shashi Kant*

The National Commission on Agriculture (1972) identified low productivity of Indian forests as the main cause of all the problems and recommended huge investments in plantation forestry to increase the output of forest land. To manage these investments, it also recommended introduction of concepts, methods and techniques of 'Business Management' to effectively utilize the investments to be undertaken by the new institutions of Forest Development Corporation.

To meet short term expectations of rising population, a concept of Social Forestry was introduced. This change over was of direct relevance to the concept of management, different from the traditional 'Business Management'. The induction of social and behavioural skills in forestry was recognised by identifying the social role of forests apart from business role in which the economics, finance and marketing play an important role.

With all this background, it was felt that the managerial skills were essential in addition to technical knowledge to manage forests in the changed environment. The necessity to create an institution which could develop these skills in the future forest managers was realised by Government of India. A society was registered on 15th June, 1982 in the name of Indian Institute of Forest Management Society. Indian Institute of Forest Management (IIFM) is an autonomous institute of the society with grant in aid from the Government of India.

The institute, on first July 1988, launched its Postgraduate Programme in Forestry Management (PFM) leading to the award of Postgraduate Diploma in Forestry Management (PGDFM).

The first batch of 27 students passed out in March 1990. All the students were placed from the campus itself. The average per month salary, excluding PF, LTC and bonus etc. was approx. Rs. 3450 i.e. (Basic + Allowances + HRA). On addition of estimated P.F., LTC, Bonus and Medical benefits etc., the average monthly salary was Rs. 4000 approximately.

The client organisations can be grouped under seven major heads i.e. Industries, Corporations, Consultants, Non Government Organisations, Research Organisations, Tea Estates and Institutions for higher studies. Industries and Corporations can be subgrouped in 'Forest Based Industries and Other Industries' and 'Forest Corporations and Other Corporations'.

Group of 'Institutions for Higher Studies' does not participate in campus recruitment programme, but interested students after successful completion of entrance examination, group discussion and interviews, join the institute for higher studies i.e. fellowship programme. Except the group of 'Tea Estate', all other groups participated in first recruitment programme. The maximum number of students – eight, joined the industries sector and next were the corporate and consultant sectors, with six students each.

Within a period of almost one year, a large number of students have changed their jobs. The students have changed the sectors (groups) as well as the jobs in the same group. The position of students in the beginning (April to June 1990) and a year later in August 1991 is shown in Bar Chart No. 1.

As regards the movements of students, out of 27 students, nine have changed their first jobs and out of these nine, four have changed their second job also. Thus the total movements in first batch (1988-90) within a period of one year have been thirteen.

The second batch of PFM (1989-91) was of 20 students only. Two of them were not in a position to complete the PGDFM requirements in March 1991 (scheduled time). Remaining eighteen students were placed from the campus. The average monthly salary (excluding PF, LTC and medical benefits etc.) was Rs. 3600. On adding the estimated value of above benefits, the average salary worked out to Rs. 4200. Twelve new organisations participated in campus recruitment programme of second year. Out of eighteen, eight students were picked up by the new organisations (the organisations which did not participate in first placement programme of the institute). Within a very short span of 2-3 months, three students changed their first organisation. The comparative position of PFM (1989-91) batch is shown in Bar Chart No. 2.

The data given in Bar Chart Nos. 1 and 2 prove that major client organisations are Forest Based Industries, Corporations/Public undertakings, Consultants and Non Government organisations (NGOs). The relative strength of the students, working at present in different organisations is shown in Pie Chart Nos. 1, 2 and 3.

Thus the experience of last two placement programmes indicates that there is a large number of organisations outside the traditional forestry sector which are involved in forestry activities. Thirty eight organisations – ten industries (BILT, BILT-Tree Tech, Orient Paper Mill Amalai, Century Paper Mill Lalkua, WIMCO, Harihar Polyfibres, Straw Products, South India Viscose, Bhadrachalam Paper Boards and A.P.Rayons), seven Consultants including International Organisations (ISO/Swedforest, Ford Foundation,IGSS, TCS, ORG, AFC and Om Consultants), six Corporations/Public Undertakings (M.P. Forest Development Corporation, Orissa Forest Corporation, Andaman & Nicobar Forest Corporation, TRIFED, Sardar Sarovar Nigam and Rashtriya Vriksha Mitra Sahayog Ltd.), thirteen Non Government Organisations (SPWD, VIKSAT, PRADAN, AKRSP, PRIDE, PIDIT, YFA, UTTHAN, CSE, IBRAD, Gram Vikas, Sewa Mandir and Ram Krishna Mission) and two others i.e. TERI and Tata Steels participated in our last two placement programmes. There are number of other organisations i.e. other forest based industries, tea estates, river valley corporations, tribal development corporations, etc. which could not be tapped during last two years, but are potential employers of forestry managers. Thus the clientele of forestry managers is very large. The placement dynamics of two batches (trend of changing the jobs from one organisation to other within a short span of one year) proves the adequacy of opportunities to forestry managers outside the traditional forestry sector.

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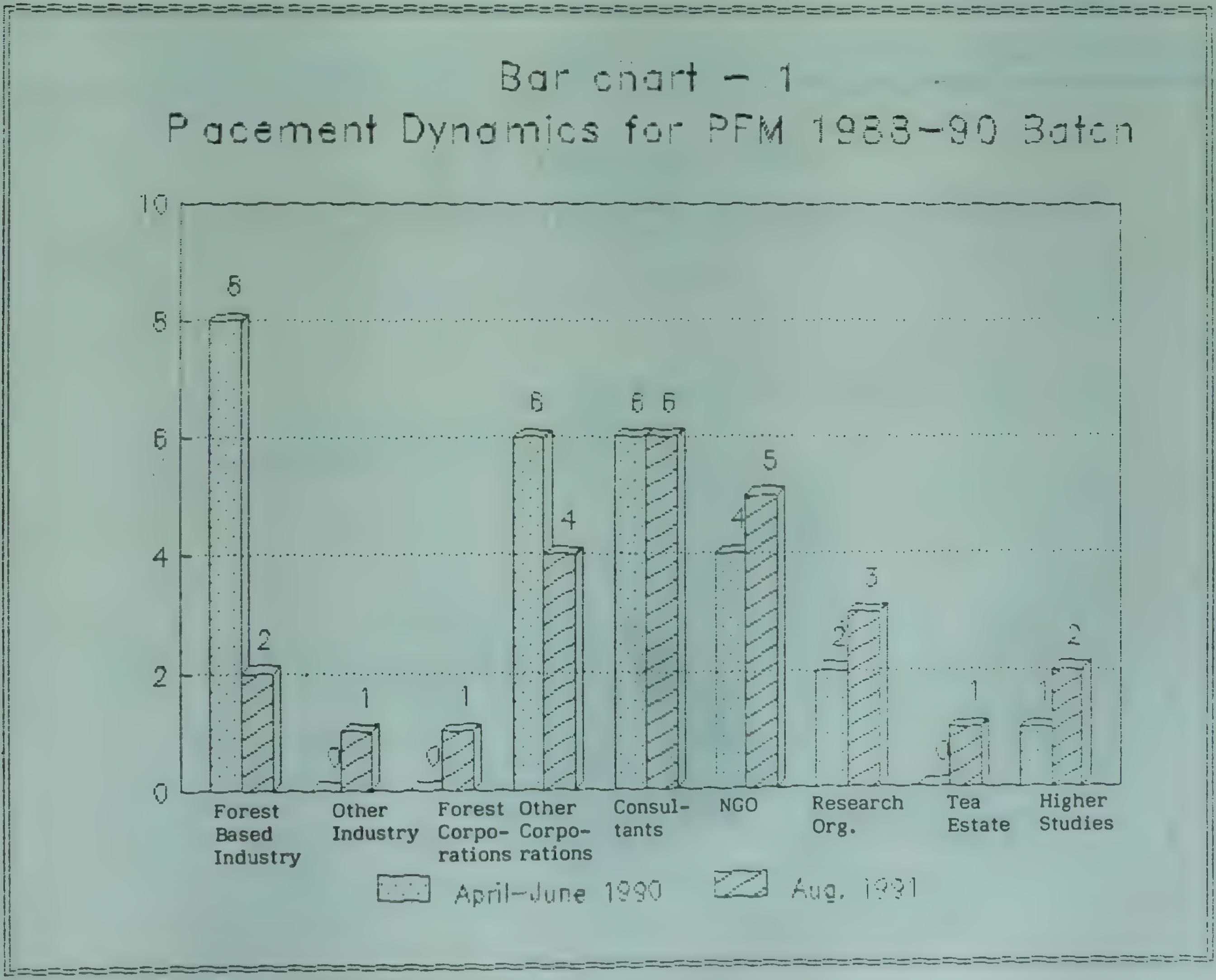
With the new Forest Policy-1988, which has two major characteristics i.e. 'as far as possible, a forest based industry should raise the raw material for meeting its own requirements' and 'the holders of customary rights and concessions in forest areas should be motivated to identify themselves with the protection and development of forests from which they derive benefits', the scope of forestry managers will increase in Forest Based Industries and Non Government Orgnisations.

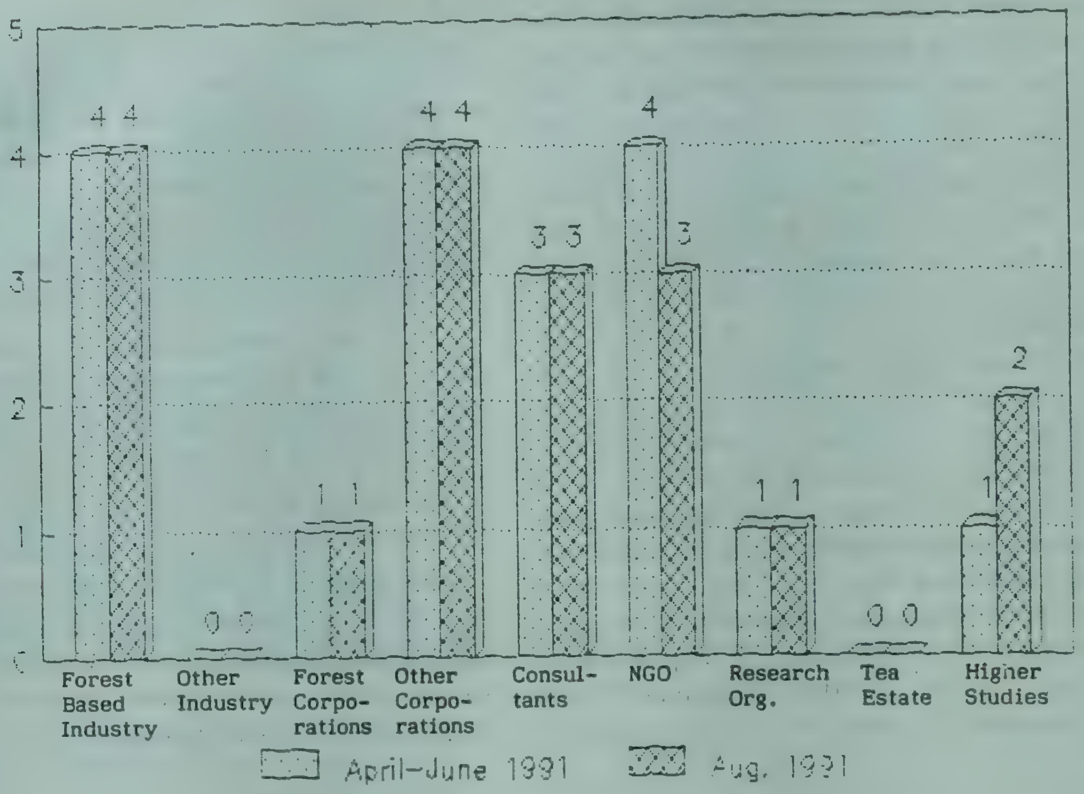
With the heavy emphasis on 'Participatory Micro Planning and Joint Management Plans' by donor agencies i.e. World Bank, USAID, Ford Foundation etc, the consultants will also need the forestry managers.

At present only two of our students are working in Forest Corporations i.e. Madhya Pradesh Forest Development Corporation and Orissa Forest Corporation. We hope that with changed environment the other Forest Corporations as well as Social Forestry Directorates will also come forward and will open their closed gates to professional managers.



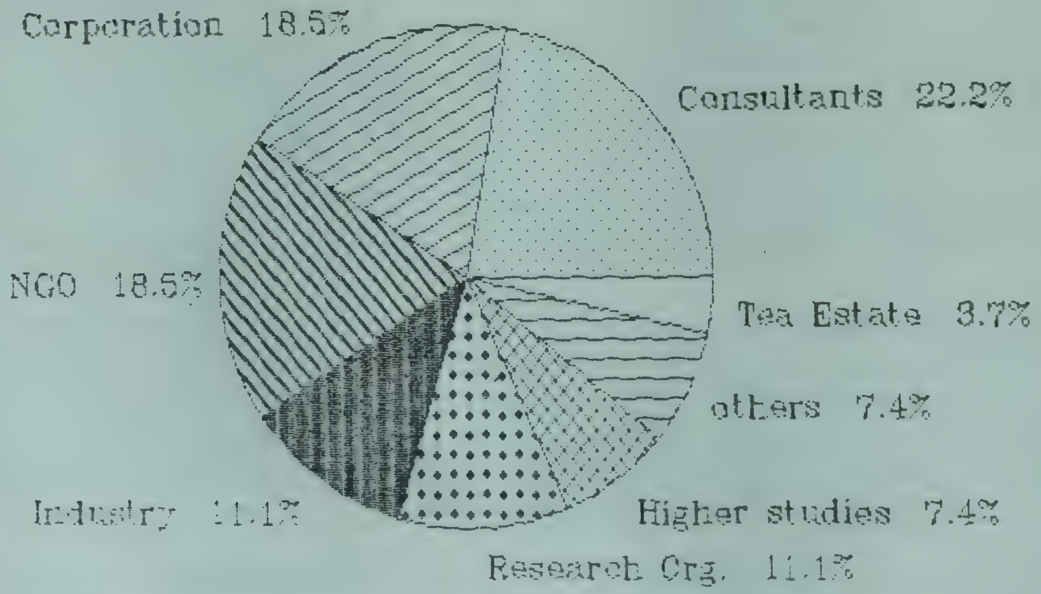
Bar chart - 2

Placement Dynamics of PFM 1989-91 Batch



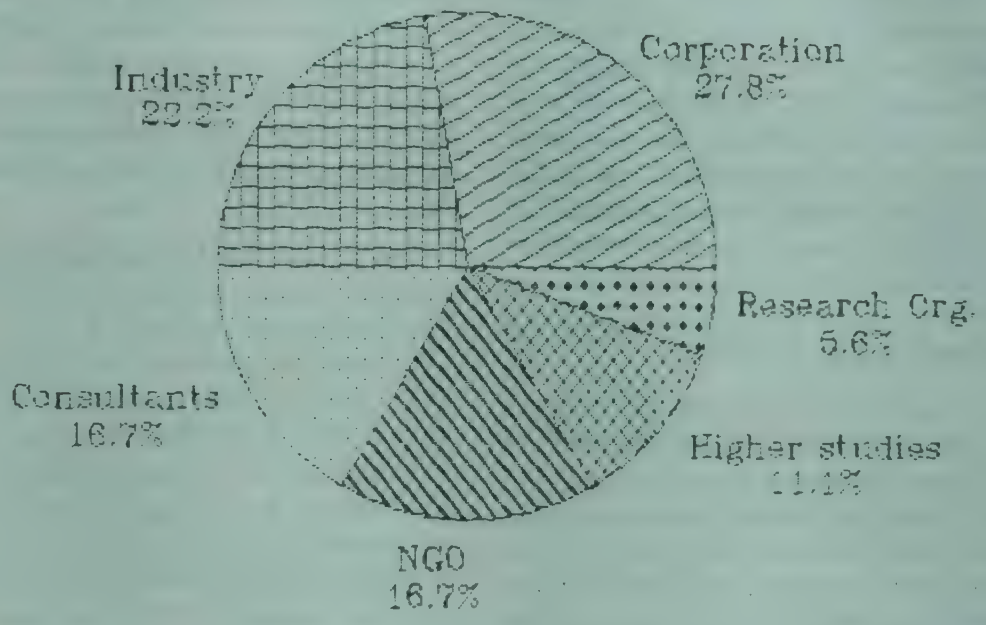
PIE-Chart : 1

Relative position of PFM 1988 - 90 Batch



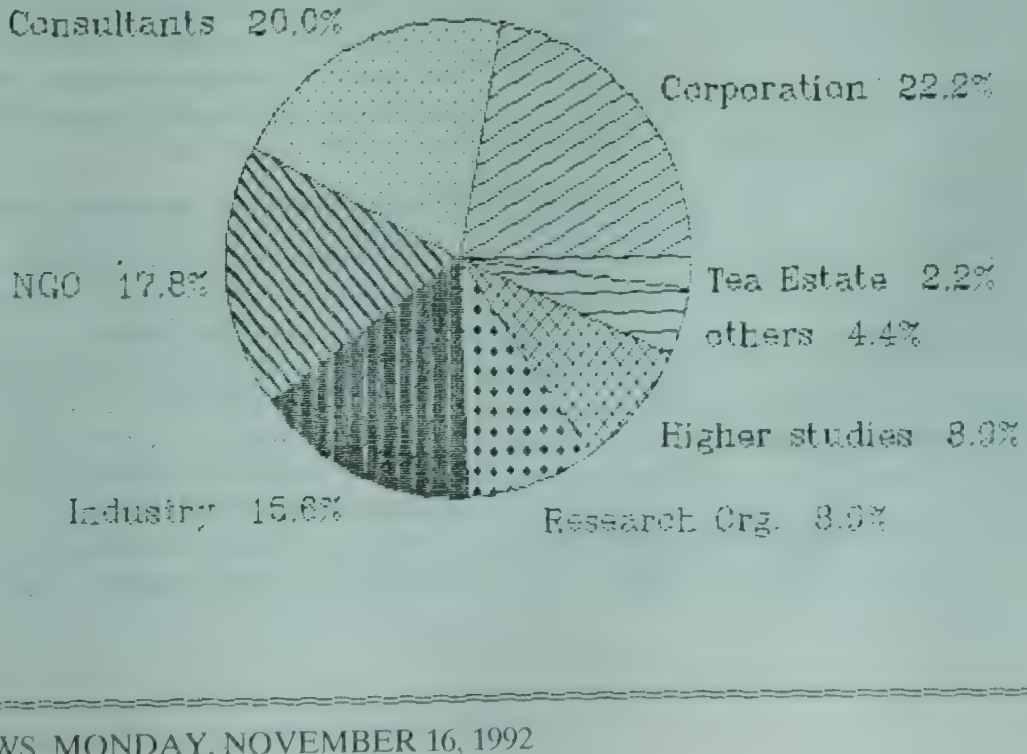
PIE–Chart : 2

Relative position of PFM 1989 – 91 Batch



PIE–Chart : 3

Relative position of both the batches combined



Quality Control in Educational Research

Some Issues

S.K. Pradhan*

Research as a process has a direct bearing on society and its development. Research is always meant for development, no doubt, but sometimes a false output from a spurious piece of research may lead to holocaust in the society. Hence some sort of quality control is a must in any kind of research either in physical sciences or in behavioural sciences. In physical sciences a false research finding may be easily identified but in behavioural sciences it is too difficult because it deals with a very complicated phenomenon of human behaviour. Among the behavioural sciences, Educational Research (ER) is considered to be of recent origin in India and is yet to reach its maturity (Buch - 1974).

But looking at the quantitative growth, ER in India can no longer be considered in its infancy. Since the first thesis accepted by Bombay University, a period of 5 decades has elapsed . ER is no longer limited to Ph.D. level research only. Research reports in education are also prepared at Master's (M.Ed./M.A.) and M.Phil levels. Many research projects are also undertaken by the teachers at universities and colleges. In addition to that some professional research institutes have also come into existence likes, NCERT, NIEPA, AIU, IIE, NIAE, SIEs, SCERTs, etc. These institutes are completely dedicated to research and development in education. Till the end of 1988, a total of 3686 research reports had been produced out of which 2272 had been conducted at Ph.D. level and 1414 at project level (Table 1)

Table 1: Quantitative Growth of Educational Researches at Ph.D. and Project level.

Years	*Ph.D.*	*Project*	*Total*
1941-50	10	1	11
1951-60	62	59	121
1961-70	216	298	514
1971-80	887	626	1513
1981-88	1097	430	1527
Total	2272	1414	3686

Source: 4th Survey of Research in Education, NCERT, 1991.

From the above table it can be seen that ER has taken long strides and its growth is phenomenal both at Ph.D. and project levels. As many as 29 thrust areas have been identified in the field of ER. Of these 'Psychology of Education' has received more attention with 486 research reports and 'Social Science Education' is the least explored area with only 36 reports to its credit. It has been estimated that, in the last decade i.e. 80s, on an average a Ph.D. in Education rolls out every 3rd day from the assembly line of an Indian University (Buch-91).

But in spite of this phenomenal growth ER has not made any impact on the educational and social system. The National Commission on Teachers-I remarked that, "both quantiatively and qualitatively the record of research is far from impressive. It is very undeveloped and is quite insufficient to serve as a basis for policy formulation and administrative decision making". Hence there is a strong feeling for a fresh look at the programme and practice of ER in India which despite its long standing has not shown evidence of maturity. And the standard of ER is far from satisfactory.

But what constitutes standard or quality of ER is hard to define. There is no standard measure to distinguish between the quality & non-quality research is education. 'Quality Control' is a concept widely used in industrial sector to certify the final products as reliable. Here the quality is controlled during the input stage and the processing stage. Quality in inputs refers to the standard of raw materials used and the skilled manpower to process it with care and also the experts to monitor the process under strict supervision. Similarly at the processing stage quality is checked in terms of a sound formula/theory for processing, adequate analysis during the process and finally the evaluation of whole product before it is delivered out of the plant. Applying the same theory it can be said that ER depends upon the quality of its inputs in terms of researchers and the supervisors, quality of the process – research methodology and its evaluation.

Human Inputs in Educational Research

We consider the basic human inputs in ER, those who have passed their Master's degree (Grade or %age of marks varies from institute to institute) examination are eligible to join research in education at Ph.D. level. Now-a-days in the name of interdisciplinary approach many sub-standard students from other disciplines are joining research in education only because they are unable to do it in their basic discipline for some reason or the other. Many school teachers have also started joining ER as their part-time or leisure time engagement without ever realising the rigour and demand for the job of a researcher. To check such type of back door entry into Ph.D. a few universities have made provision that M.Phil. in Education is the essential criteria to join Ph.D. programme, in addition to the Master's degree. But many universities are not ready to take such a drastic measure with the fear that enrolment into Ph.D. will decrease. It is only the quantitative growth that matters as it brings false credit to the institutions in the absence of rigid quality control. In this regard UGC's decision to provide financial assistance/fellowships to those candidates who have passed the National Education Test (NET) is a commendable step. The point of argument here is to enforce a check at the entry point into ER to maintain its academic standard high. According to the 'Fourth Survey of Research in Education' the last 3 decades, particularly in the 70s and 80s many candidates joined research because UGC made it an essential criteria for recruitment to the job of teachers and their promotion thereafter to other higher posts at university level. Hence the goal of the researcher was to get the Ph.D. degree by any means and at the cost of quality, of course. Similarly the ER at M.Ed., M.A. (Education) and M.Phil level also suffers from the age old malady of mediocrity because of the less competent researchers.

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At the same time the researches produced at project level and institutional level may not be taken for granted that those are of quality. So far as project level researches at college or university level are concerned, it is the secondary activity of a teacher to do research apart from his basic duty of teaching. Above all we know how these researches are planned, when and how they get approval of financial support and the way those are executed. Hence quality is hardly expected when it is of a secondary type of activity. Another argument is that if these teachers are not able to produce a standard M.Phil. or Ph.D. thesis under their supervision then how their work at project level are appreciated as quality. It is difficult to comment about the quality of researchers at institutional level (other than university) where the institutions have their own autonomy regarding the selection of research personnel.

The Process

The research process in education involves selection of problem, methodology and analysis. The work of quality is expected at all the above levels. It is a common phenomenon in ER that a problem is selected without developing a sound theoretical framework or conceptual framework. Therefore, most of the research problems in ER are duplicating in nature. Another point in this regard is, whether quality can be achieved only if a problem is selected in an appropriate manner. Obviously the answer is no because a relevant problem if studied with wrong methodology will produce false outputs. Hence at this stage proper monitoring and competent guidance is very much essential to maintain the quality. Care should be taken to select right kind of tools, sample and design of the study. Generally it is found that there is always a craze among the researchers to select foreign made tools directly or by modifying it partly to study different aspects in Indian context. Selection of sample is just like a cup of tea on the part of the researcher, whenever and wherever needed is manipulated according to the convenience of the individual researcher. Similarly the design of the study is either duplicated or manipulated abruptly. The last but not least important aspect of the research process is analysis and interpretation of the results where quality control is a must. It is found that sophisticated statistical techniques are used by the researcher without ever considering the assumption behind such techniques which indirectly lead to wrong direction. The researcher has to overcome the myth that the use of sophisticated statistical techniques is a determinant of quality. Rather to set standards in ER most appropriate quantitative and qualitative techniques should be chosen.

The Evaluation

Evaluation is the most important step where precision, accuracy and rigour is needed. There should not be any compromise with the quality of the research work because it is the final step to give way to a quality work or to restrict the substandard work before it infects the whole research process. All the research reports at Master's, M.Phil. and Ph.D. level are subjected to evaluation and scrutinised for quality. And it is the senior most academics who are involved in it from whom sincerity, responsibility and committment is expected. If now we are crying over deteriorating standard of ER then the examiners of such reports are to be blamed equally. Research reports are expected to be checked strictly regarding the relevancy, applicability and usefulness of the problem, appropriate methodology and accurate interpretation of results.

The researches conducted at project level also require to pass through the process of evaluation. Recently UGC's decision of mid-term evaluation of all the sponsored (UGC) research projects is definitely a bold step in this regard. Though many of us may feel differently regarding such type of strictness in evaluation but such kind of a bitter dosage is a must to save the already ailing ER from 'Quality Deficiency Syndrome'.

Apart from the evaluation of reports by an examiner or a group of examiners, the research findings are supposed to be disseminated properly to elicit further criticism from intellectuals.

(Contd. on page 20)

WOMEN'S EDUCATION

Prof. G. Ram Reddy, Chairman, University Grants Commission, delivered the Convocation Address at the fourth convocation of the Avinashilingam Institute for Home Science and Higher Education for Women (Deemed University), Coimbatore. Taking a holistic view of the Women's Education, Prof. Reddy stressed its 'overall objective i.e. to give much needed awareness to women through education'. Excerpts

Modern education in India began for men with the passing of the Act of 1813 by the East India Company, which wanted to keep a strict neutrality in social and religious spheres. It did not take any direct action for women's education as it felt that the step would flaunt the existing norms of strict privacy and segregation of women.

The earliest modern schools for girls were opened by the Christian missionaries for converts. In course of time they were extended to non-Christians also, who hesitatingly accepted this offer. For accelerating the pace of women's education, credit goes to some of the early enlightened English men like JAD Bethune and Elphinstone, whose schools excluded religious instructions. These pioneers were followed by Ram Mohan Roy and Ishwar Chandra Vidyasagar. The Despatch of 1854 from the Directors enjoined upon the officials of the Company to pay special attention to the education of girls. But the progress remained slows till 1890.

The movements of social reform and cultural revivalism greatly contributed to furthering the cause of women's education. It came to be seen as a necessary condition for raising their status and improving the condition of family life.[1]

The National Committee on Status of Women in India notes that :-

> ".....denial of education and early marriage prevented the development of personality and rationality of women. Stunted and crippled personality affected the harmony of the family atmosphere weakening the bonds of the family."[2]

The non-career oriented early development of women's education has been viewed by some as only "an auxiliary development of education of men and the rise of colonial bureaucracies." During this period, female education was encouraged because educated males wanted educated brides.

Many advocated for women's cause in developing societies have felt that women's education suffers from a bias, even where it is supported. They point out that "the education of men was dominated by perspectives of the economics of education (manpower development, rate of returns, human capital formation etc.), whereas women's education remained confined within the 'home economics' syndrome inherited from colonial administra tors which took a very partial view of women's lives and thought it fit to train them in domestic skills in the Victorian, middle class housewife tradition."[3]

Prior to Independence, the national leadership was aware of the problem and they identified women's education as a problem area. Most prominent and forthright among the champions of women's position and their education was Sarojini Naidu. Talking of the position of women, she said at the beginning of the first century, India was already a great civilization and it contributed to world's progress in which there are radiant examples of women of the highest genius and widest culture. "But as by some irony of evaluation the paradox stands to our shame", she cried, "it is time for us to consider how best we can remove such a reproach, how can we best achieve something more fruitful than the passing of empty resolutions in favour of female education from year to year."[4]

Since Independence several measures have been taken not only to improve literacy among women but also to provide educational opportunities to them at all levels. National Policy of Education, 1986 says:[5]

> "Education will be used as an agent of basic change in the status of women. In order to neutralise the accumulated distortions of the past, there will be a well conceived edge in favour of women. The national education system will play a positive, interventionist role in the empowerment of women".

Despite the efforts made by the Central and State Governments, the position of women in education is far from satisfactory.

In our country women constitute about 48% of the population – out of the population of 84 crores, little more than 40 crores are women and men about 43 crores. The literacy rate in the country is about 52.11% – male literacy is 63.8% and female literacy is about 39.42%. It is clear from these figures that literacy, which is basic to the development of women is very low among them, and particularly among the rural women.

When we look at the States in the country, Kerala, as is well known, has the highest (90.59%) literacy rate. In this State, 94% of the males and 87% of the females are literate. It is interesting to note that there is not much difference between the rural and urban areas. This is a noteworthy achievement. On the other hand, in some States like Rajasthan and Bihar literacy level is very low. In the case of men it is about 56% and 53% and for women it is 20.84% and 23.10% respectively. The case of rural women has been even worse.

With regard to enrolment of the girls in the schools there has been perceptible improvement, still it is far from satisfactory. Enrolment ratios in I-V classes is: boys 115.47 and girls 83.60; in Class VI to VIII it is 73.00 boys and 44.58 girls. At the tertiary level enrolment of women has increased from 16.1 percent in 1961-62 to 32.5 percent in 1990-91.

According to the revised Programme of Action-1992 a striking finding is that for every 100 girls in class I in rural areas there are only 40 in class V, 18 in class VIII, 9 in class IX and only 1 in class XII. The participation of girls in vocational, higher and technical educational institutions is very low. Similarly, proportion of women and girls in engineering and agriculture based courses is woefully low. The number of Women teachers in the low literacy states is small. The percentage of women teachers at the primary and middle schools is 21% and 23% in rural areas and 56 and 57% in urban areas.[6]

It is painful to note that such is the dismal picture of women's education after 45 years of Independence. One needs to look at the causes for unsatisfactory progress in this field. There are several obstacles, some of them have their origin in social attitudes to women and they are known to most of us. Let me invite your attention to some of the studies conducted in this area which reveal the following:[7]

1. **Domestic Work** : By the time the girls reach the age of eight, a large majority of them are required to do various domestic chores like cleaning, cooking and looking after their younger brothers and sisters.
2. **Marriages and Social barriers :** Traditionally, once a girl is married social customs are against the girl pursuing education. Early marriages are still common and in their case it is much worse. Further safety and cultural concerns may leave parents feeling obliged not to send girls to school, says a World Bank Study.[8]
3. **Economic factor :** Large number of girls in the lower middle class and poor families are required to contribute to the family income by working. The World Bank study reveals that between the age 10 and 15 girls work 8-10 hours a day on productive activities inside and outside the home. In general girls do more chores than boys.[9]
4. **Rigid school timings** : The timing of the school curricula does not suit the girls and their parents.
5. **Relevance of curricula :** This is considered to be irrelevant to the needs of the people in the society.
6. **Preference for male education :** Economic conditions as well as social factors lead many parents to educate their sons instead of daughters. What the parents do not realise is that: "The economic and social returns to education for women are substantial and on the whole probably greater than those for men."[10]
7. Many parents have no awareness of the importance of girls' education. By educating its women, a country can reduce its poverty, improve productivity, ease population pressure, and offer its children a better future. These returns justify greater investment in schooling for girls than most countries have made.[11]

The Committee on Status of Women in India which submitted its report in 1974 felt that inequality of the sexes built in the minds of men and women through socialisation process continues to be extremely powerful.[12] Far from promoting equality, the education system with its schools which "reflect and strengthen the traditional prejudices" through curricular differentiation has become subservient to the prevailing social system.

Sometime ago, a study made of the school level curricula revealed strong sex bias. Sex bias was found in 22 English and 20 Hindi language instruction text books, prescribed by the Government for more than 30 lakhs students in some States. Here are a few shocking pieces from one of the books:

> "God has made these women cent percent stupid, I mean they have no brains at all"....
>
> "There are certain things in this world that are meant for males and higher education is one such thing".....
>
> "the boys' education cannot be treated on a level equal to that of the girls."

It is shocking to learn that such men, as the authors of the above pieces, exist in this country in the later half of the twentieth century. These are stereotypes of male chauvinists in the country, and they have not changed much.

In recent years attempts have been made by the Government of India and other organisations like the NCERT to study sex bias in the textbooks and eliminate it. However, the women continue to remain the victims of social prejudices.

The Government of India has recently revised the Programme of Action.[13] It makes imperative for the entire educational system to become alive to the dimensions of gender and other educational disparities. The implementation strategy will consist of the following:

1. to give the entire education system to play a positive interven-

tion role in the empowerment of women;

2. to encourage educational institutions to take up active programmes to enhance women's status and further their development in all sectors;
3. to widen women's access to vocational, technical and professional education at all levels, breaking gender stereotypes;
4. to create a dynamic management structure that will be able to respond to the challenge posed by this mandate.

In pursuance of the revised Programme of Action, operational details have been worked out. It is hoped, that in the years to come, the programmes outlined will be implemented, with the seriousness they deserve. The experience reveals that there has been no dearth of ideas and programmes in this country, but our record of performance in implementation has not been bright.

At this stage, we need to pause and reflect on our performance in the past. The Programme of Action, rightly stresses, that the entire education system has to play a positive interventionist role in the empowerment of women. It is here that the institutions like the Avinashilingam Institute for Home Science & Higher Education for Women have a very significant role to play. While all educational institutions should respond to the call for women's education, the women's educational institutions, in particular, have an important task to perform. Years ago, addressing Women's Indian Association in 1934, Sarojini Naidu said:

> "Every woman should say to herself that in her life time she would see that women of India suffered no longer from legal or social disabilities, and the blot of untouchability was wiped out. Every woman must be faithful to her trust, for she was not merely the guardian of yesterday's ideals, but the creator of tomorrow's ideals as well".[14]

The stereotype "doormat approach" to women and their educational needs have to be changed. I hope the graduates, who are taking their degrees today, will remember the passionate words of late Sarojini Naidu. This will be quite in tune with the ancient Indian adage that:

"Etra naryastu pujayantih, ramanteh tatra devatah."

Where women are worshipped gods live there.

References

(1) For a detailed analysis see Edward Thomson and G.T. Garrat "Rise and Fulfilment of British Rule in India", 1959 – particularly chapters from Hastings to Dalhausie.

(2) Report of the Committee on Status of Women in India, 1975.

(3) Usha Nayar, Women's Education in Asia and the Pacific: Some Issues, Bulletin of UNESCO, PROAP, 30, 1989, pp. 32, 33.

(4) Quoted in Padmini Sen Gupta, Sarojini Naidu – a biography, Bombay, Asia Publishing House, 1966, p.66.

(5) Ministry of Human Resource Development (Deptt. of Education), National Policy on Education (with modifications undertaken in 1992), p.10.

(6) Govt. of India, Ministry of Human Resource Development (Department of Education) Programme of Action, 1992, p.1.

(7) Km. Shanta Bajaj, Education of Women in India, in Lakshmi Misra (ed.) Women's Issues – An Indian Perspective, Northern Book Centre, New Delhi 1992.

(8) Barbara Herz and others, Letting girls Learn, World Bank, Washington, 1991, p.27

(9) Ibid, p.29.

(10) Barbara Herz and others, op.cit.

(11) Ibid.

(12) Report of the Committee on the Status of Women in India 1975, p.281.

(13) Programme of Action, 1992.

(14) Padmini Sen Gupta, Op. cit. pp. 259-260.

Quality Control in Educational Research

(Contd. from page 17)

Conclusion

Considering the cost of higher education and the resources allocated to research and development, it can be said that quite a good portion of national revenue is at stake when the country is facing the worst financial crunch. So it is the basic duty of every responsible citizen to give full worth to the national investment. Hence a kind of sincerity, honesty and commitment is required among the researchers, supervisors and examiners. Apart from that researchers should develop a professional attitude towards research.

There should be a spontaneous flow of funds from the apex policy making bodies like, UGC, NCERT, ICSSR, Ministry of HRD and other national and international agencies to support the research endeavour. The funding agencies should not hesitate to support any sort of quality work but they should be very particular about its evaluation aspect without any compromise on quality.

Some such corrective measures are being taken by different institutions and organizations at different levels of research in education. Many such measures are yet to be taken. With all these let us hope that ER will enter the 21st century, with lot of promise and assurance regarding its quality by leaving behind all those infectious parts which have tarnished its reputation.

CAMPUS NEWS

Orientation Course in Computer Science

"Computers have entered into every sphere of human activity including education, thereby contributing enormously to precision in decision making and efficiency in implementation" said Dr. K.Jayashankar, Vice-Chancellor of the Kakatiya University while inaugurating the 8-day Orientation Course in Computer Science organised recently by the Kakatiya University in collaboration with the Andhra Pradesh Akademy of Sciences and the Andhra Pradesh State Council for Higher Education.

Dr. Jayashankar said that while introducing courses in computer science in colleges and universities, proper care should be taken as to what had gone into the curriculum and how it was taught by the teachers. Unless the course content was constantly updated and the techniques of teaching modernised, the courses offered in the area of computer science in colleges and universities would become obsolete vis-a-vis the fast changing needs of the modern society. It was in this context, Dr. Jayashankar said that the teachers engaged in the task of training the youngsters in handling the computers should be exposed to refresher and orientation courses periodically.

Prof. Dinker Sirdeshmukh, Dean, College Development Council of the University who presided said that the initiative taken by the Kakatiya University in organising the orientation course for the teachers of computer science was a novel idea since such courses were very rarely offered. He stressed the need for organising orientation course not only in computer science but also in other restructured courses.

Prof. M. Parameswara Rao, Head, Department of Mathematics, and Course Director explained the aims and objectives of the programme. According to him 26 teachers representing 14 affiliated colleges of Kakatiya University participated in the training programme.

Gandhian Network of Educational Institutions

A decision to form a Gandhian network of educational institutions in South India is reported to have been taken by representatives of different voluntary organisations and institutions at a meeting held in Madras recently.

Dr. D.K. Oza, Vice-Chancellor, Gandhigram Rural Institute (deemed university), told reporters that today's meeting was the second and conclusive one to discuss several issues, including the network. The Maharashtra Governor, Mr. C. Subramaniam, had presided over the first meeting held at Gandhigram in April.

The Gandhigram network will be registered as a trust with Dr. D.K. Oza, Vice-Chancellor, Gandhigram Rural Institute as chairman and Dr. S.V. Chittibabu, former Vice-Chancellor of Annamalai University and President, Association of Indian Universities, Dr. S. Muthukumaran, Vice-Chancellor, Bharathidasan University, Tiruchi, and Dr. Rajammal Devadass, Vice-Chancellor, Sri Avinashilingam Institute of Home Science (deemed university) as vice-chairmen. All the participants agreed that education was passing through a crisis. "We must admit this publicly now, a conspiracy of silence will not do," said Dr. Oza.

He said all agreed that education had lost its excellence, relevance and accountability. The question now was whether we could build up a work culture in educational institutions, he added.

Those who work in educational institutions cannot claim rights, they can claim only fundamental values and the crisis situation arose because this distinction was not properly understood, said Dr. Oza. He deplored that there was no special attention to women's education and there was no student counselling in spite of a recommendation to this effect by the Kothari Commission years ago.

An alternative culture is required on the campuses, Dr. Oza said. He envisaged a situation when about 30 educational institutions and an equal number of voluntary organisations would join the network in the next two or three months. He said a large number of intellectuals would also be invited to become a part of the network. Every institution in the network will have a group called "Teachers and Students against violence."

Cognitive Paradigms in Knowledge Organisation

The Second International ISKO Conference was recently organised by the Madras Library Association, the Sarada Ranganathan Endowment of Library Science and the University of Madras at Madras.

Dr B. Ramamurthi, Neurosurgeon, who inaugurated the conference, spoke about 'The information explosion and the Human Brain'. He reminded that "the powerful eyesight and sensitive hearing attributed to the Red Indians arose from the fact that they are using these senses constantly and effectively" and "that the industrial revolution and recently the modern technological revolution have extended the power of man but they have in no way increased the power of his brain". Because of the use of various technological aids that enable the scope of sensory experience and increase our motor skills, the facilities in the brain in various areas were becoming gradually blunted, he added.

Professor R. Narasimhan, CMC Fellow in IT in his keynote address on the theme of the Conference – Cognitive Paradigms in Knowledge Organisation – pointed out that "knowledge domains are always multiplying. New fields are constantly appearing. Hyphenated fields (like cognitive psychology, psycholinguistics, neurolinguistics, neurophilosophy) cut across traditional disciplinary boundaries and call for creative classificatory efforts". He also mentioned that it was not sufficient to let technology (e.g. Computers) handle queries by enabling the enquirer to directly interact with terminals which contained abstracts of books, papers and reports. A creative interface with a librarian was needed all the time to resolve query ambiguities and mismatches between queries and available classifications, he opined.

Summing up the three day proceedings, Professor Eric de Grolier of UNESCO, Paris, remarked that "classification in general and Ranganathan classification in particular has something to do with creativity. But creativity begins where frontiers between sciences are more or less shrinking. In very many cases creative persons are multi-disciplinary and at the frontier between different sciences or different subjects". He also highlighted the extent of growth of knowledge in various subject areas such as law, medicine, ecology, art, sociology and was surprised that not much progress had been made in General Classification Theory and Classification, apart from what had been done in Bangalore by Neelameghan and others for expanding the list of principles of Ranganathan. Professor de Grolier also drew attention to Hypermedia which is in the course of revolutionising the information retrieval systems in general and the organisation of knowledge and classification in particular.

The conference brought together a mixture of people from different fields, different specialities for discussing one of the most important studies – information retrieval systems, knowledge representation in general, and knowledge classification and ordering in particular.

The meeting was attended by over 70 delegates including those from Austria, Canada, Denmark, France, Finland, Germany, Japan, Rome, USA and Spain. Dr Ingetraut Dehlberg, President of the ISKO in Frankfurt introduced the subject of the conference and the appropriateness of its happening in Madras, being the birth centenary year of Dr S.R. Ranganathan, whose significant works were done while he was the Librarian of the University of Madras. Dr M.A. Gopinath, Head of the Documentation and Research Centre, Bangalore welcomed the gathering and Dr (Mrs) Suseela Kumar, President of the Madras Library Association proposed a vote of thanks.

Institutes for Rural Development

The Andhra Pradesh Chief Minister, Mr. Kotla Vijayabhaskara Reddy, said that his government was planning to start institutes of rural development to expedite the socio-econimic transformation of rural and backward areas of the State. Mr. Reddy was inaugurating a conference of Vice-Chancellors of the State Universities held under the auspices of Council for Higher Education in Hyderabad recently.

These institutes, Mr. Reddy said, would either function independently or be formed as new departments within the existing universities. Institutions of higher learning should be closely associated with plans initiated by the government for economic development and establish a close rapport with industry, he said.

Recalling the suggestion of Indira Gandhi at the 1970 Science Congress in Visakhapatnam, the Chief Minister said the recommendations made by many commissions and committees to study the education system had not helped in making higher education relevant to Indian situation and that there was an urgent need for a major revision of the curriculum.

He said investigations and research findings to a large extent were theoretical and did not percolate to the field where such knowledge was to be used. He said the gap between the research findings and their application in the field should be bridged continuously.

Distance education should serve that setor of the population which was not getting the benefit of traditional education. In particular, it should be effectively used for development of skills and modernisation of tools and implements in the village industries and agriculture in order to evolve a 'learning society' as quickly as possible.

He called upon the Vice-Chancellors to make serious efforts for restoration of the academic year immediately to its proper stage.

The Minister for Higher Education, Mr. Patti Rajam, who presided expressed concern over opening of more colleges and said that these would dilute standards. He had a dig at autonomous colleges stating that they were interested in getting autonomy in management and nothing else.

There was a need to set up training colleges for teachers. Teachers should be provided with refresher course.

Mr. S. Kasipandyan, Principal Secretary, Education Department, said there should not be over-concentration on computer studies and high-tech research.

Prof. B. Balakrishna Reddy, Vice-Chairman, AP State Council of Higher Education, welcomed. Prof. I. Gopal Reddy, Vice-Chancellor, JNTU, also addresed the conference.

JNU Recognition for Raman Research Institute

The Jawaharlal Nehru University (JNU) has accorded recognition to the Raman Research Institute (RRI), Bangalore to enable it to offer research programmes leading to the award of M.Phil/Ph.D degrees of the University.

The Institute, named after Sir C.V. Raman, Nobel Laureate, is engaged in studies and advanced research in all disciplines of science with particular emphasis on pure and applied branches of science. The major areas of interest with the Institute are Liquid Crystals, Radio Astronomy, Theoretical Astrophysics, Theoretical Physics, Instrumentation for Astronomy etc. RRI is financed mainly through grants from the Government of India, Department of Science and Technology besides some fundings by way of sponsored research financed by national and international agencies.

The Institute has on its rolls over 100 scienctists inclusive of about 30-35 Ph.D students pursuing their research interests in a whole lot of disciplines of science.

RRI is the 11th Institute recognised by JNU for the award of degrees, other ten being Bhabha Atomic Reserch Centre (BARC), Bomaby; National Institute of Immunology (NII), New Delhi; Centre for Cellular and Molecular Biology (CCMB), Hyderabad; Centre for Development Studies, Trivandrum; and six defence institutions viz National Defence Academy (NDA), Pune; Army Cadet College, Dehradun; College of Military Engineering, Pune; Military College of Electronics & Mechanical Engineering, Secundrabad; Naval College of Engineering, Lonavala; and Military College of Telecommunication Engineering, Mhow.

Problems of Women Bank Employees

The Department of Bank Management, Alagappa University conducted a workshop on problems of women bank employees on 15th October. The workshop was sponsored by the Innerwheel Club of Karaikudi.

The president of the Innerwheel Club Mrs Geeta Raghvan in her address stressed the role of women in uplifting the rural society which in turn would lead to national development. She hoped that the workshop would analyse their problems threadbare and contribute to the development of women.

In his inaugural address, Dr K. Nagappan, Vice-Chancellor, stressed the role of women in the society and work place. According to him endeavours of this nature would create a forum for women to discuss their problems.

The moderator Mrs Uma Ramani of State Bank of India said in the early days women were reluctant to accept assignments and responsibilities. But now they work at par and even better than their male counterparts. Feminity was previously considered a liability by the men but women with their confidence and courage have chosen their career and also tried to define and redefine their contribution to the work situation.

According to Mrs Usha Ramamoorthy of Indian Bank, women bank employees do not have any exclusive problems except in case of canvassing for deposits, collection of debts and also in case of transfer. She expressed the problems faced by women while attending to field assignments especially during periods of strikes and riots. But still she stressed the importance of adaptation to work situations.

Mrs Vijayalakshmi from the Indian Overseas Bank viewed that field officers' job for women was more risky. Women were always the victims of criticism from higher officials, she added.

Ms R. Alamelumangai of the Department of Bank Management viewed that the role of women was dynamic and now they were holding challenging assignments in traditional and complex endeavours. According to her, women go for work out of sheer necessity and the basic problem for them is the negative attitude of the society towards them. Besides they cannot extract the best from their male subordinates. At times, they are handicapped in taking independent decisions.

Ms K. Meyyammai from State Bank of India said that no field has been left unexplored by women. She was of the strong opinion that sex was not an hindrance for any job. Her problem was that they were not able to handle laborious jobs. As a women employee it was difficult to handle rude customers and ultimately they had to seek the assistance of male counterparts.

Mrs Kannamma of Canara Bank felt that they were over shadowed by male counterparts in functions and celebrations.

Mrs S.O. Lakshmi, an employee of the Bank of Madura Ltd. highlighted the dual role of bank employees, first as a banker and next as a housewife.

The moderator in her concluding remarks designated many problems as transition problems and problems of this nature could very well be remedied through better understanding among employees and sharing of views in appropriate forums.

Symposium on Bioclimatic Architecture

"Architects must function as social scientists and incorporate the environmental dimension in their planning," said Mr. Bhishma Narain Singh, Governor of Tamil Nadu while inaugurating a symposium on Bioclimatic Architecture and an

Indo-Italian Exhibition on the subject, at Anna University recently.

While the British could be credited with the introduction of elementary modern architecture in the country, it was primarily intended to serve their needs as the rulers. Military cantonments and civil lines were developed, and hill stations and tourist resorts came into being as an incidental benefit. But the social concern was lacking. In post-independence India, the situation had changed, and the needs of the ordinary man and his environment should become the focus of attention, Mr. Singh said.

Unfortunately, slums had come to coexist with high rise buildings in the metropolitan cities and big towns. At an international level, the same phenomenon was found in a different form, with the developed countries consuming relatively large proportion of resources, affecting the remaining part of the world.

It was absolutely necessary to change the architecture of the cities and towns showing concern for the physical environment which encompassed the social environment also.

The exhibition organised on the basis of research conducted by the Italian Agency for New Technology. Energy, and Environment (ENEA) focused on energy saving in building, and alternative energy sources.

Dr. M. Anandakrishnan, Vice-Chancellor, Anna University said the exhibition with the basic theme "Energy and Architecture" produced by ENEA in collaboration with the National Institute of Architecture, Italy, was travelling all over the world.

Computer software developed by ENEA to assess energy consumption patterns in architectural designs as well as audio-visuals on bioclimatic architecture were on display at the exhibition.

Institute for Entrepreneurship Development

The University of Madras is reported to have agreed in principle to a proposal of the Tamil Nadu Small and Tiny Industries Association (TANSTIA) to set up and institute for entrepreneurship development. Styled as the TANSTIA Institute of Entrepreneurship Development (TIED) it will be located in Madras and will train 15 to 20 entrepreneurs annually in collaboration with the university. The institute will admit candidates with degrees/diplomas in engineering, science, commerce etc. Mr. V. Krishnaswamy, newly-elected president of the association for 1992-94.

News From UGC

Countrywide Classroom Programme

Between 23rd November to 30th November, 1992 the following schedule of telecast on higher education through INSAT-1D under the auspices of the University Grants Commission will be observed. The programme is presented in two sets of one hour duration each every day from 1.00 p.m. to 2.00 p.m. and 4.00 p.m. to 5.00 p.m. The programme is available on the TV Network through the country.

Ist Transmission

1.00 p.m. to 2.00 p.m.

23.11.1992

"Microwaves."

"New Genetic Tool for the Improvement of Species."

"Capital Budgeting."

24.11.1992

"The Hydrogen Spectrum."
"Amniocentesis: Medical Uses."
"Using Audio Visuals."

25.11.1992

"Cactus – A Beautiful Bramble."
"Bonn – 2000 Years Young."

26.11.1992

"Buried Treasure: Silver."
"Bilingualism in India
and Abroad."

27.11.1992

"Origin of Geometry."
"A Discussion on Secularism."
"Eutrophication."
"Child Psychiatry - III: Help
Your Child."

28.11.1992

"Nrityaganga - VI:
Analysis of Abhinaya."
"Pearls and Bangles
of Hyderabad."
"Week Ahead."

29.11.1992

No Telecast

30.11.1992

"The Pursuit."
"Yours Sincerely."

IInd Transmission

4.00 p.m. to 5.00 p.m.

23.11.1992

"Indian Agriculture –
Technology, Prices and Beyond."
"Innovation: Return to the Sea."

24.11.1992

"The Wonder World of
Alloys – Non-Ferrous."
"Rabies – 100 years after
Pasteur."
Educational Technology."

25.11.1992

"Adaptations of Millipedes."
"Pixels and Landscapes."

"Pages from History:
The Egyptian Mummy."

26.11.1992

"Coal - II: From Pit Head to Blast Furnace."
"Masterpieces in World Literature: The Two Epic Traditions - Eastern and Western."
"Tribal Art and Architecture."

27.11.1992

"Waste Disposal."
"India in Space - Achievements and Prospects.
"Mharo Rajasthan."

28.11.1992

"Nrityaganga - II."
"The Transformable Halls."
"Week Ahead."

29.11.1992

No Telecast

30.11.1992

"The Pursuit."
"Yours Sincerely."

Ambitious Plan to Promote Adventure Sports

The University Grants Commission (UGC) has drawn up an ambitious plan to promote adventure sports in universities and colleges for all round development of the country's youth. Adventure sports like balooning, aero-gliding, long cycle trips, trekking and long boat journeys through rivers and along sea coasts, would be introduced in higher education institution in a systematic manner to ensure that the youth developed balanced personality.

The commission has signed an agreement with the National Adventure Foundation (NAF), the implementing agency for the scheme, which will be valid for the Eighth Plan period. The scheme and its implementation would be evaluated in the last year of the plan (1996-97) for its continuation beyond the plan period.

About Rs 40 lakh would be spent on the scheme during the current year itself and the allocation would be increased next year depending on the response to the scheme after the annual evaluation.

Similar annual evaluation would be done throughout the Eighth Plan period and allocations raised as the scheme progressed.

During the current financial year the scheme would be implemented on a smaller scale. The adequacy of the arrangements for the various programmes would be tested during this period.

The UGC and the NAF have formed a five-member coordination committee for overseeing the implementation of the scheme and to clarify problems from time to time.

Normally there would be separate programmes and events for boys and girls. But where the the programmes and events were combined, the colleges and universities would be informed about it while inviting nominations. Nominations would normally be invited three months before the beginning of the programme and list of participants would be finalised one month before the event.

The NAF would identify professional agencies for organising adventure sports programmes and select them on the basis of their past performance and expertise.

As per the memorandum of understanding, the NAF will also negotiate and work out :

- The duration of programme and the number of students and teachers per programme.
- The health/fitness/skill requirement of participants as eligibility criteria for participation in the programme.
- The kit and the gear required to be brought by the participants at their own cost for participation.
- The level of competence/skill expected to be acquired by participants at the end of the programme.

Normally, a participant would be required to pay for the journey to the place of the programme and back and the personal equipment which needs to be retained by the participants. A participant would also be required to pay a nominal fee.

The UGC would ordinarily not pay for cost of procurement of any equipment to the organising professional agency, for the safety measures taken and for boarding and lodging the participants.

The UGC will communicate to the foundation every year, in the beginning, the amount available for implementation of the scheme and the NAF will regulate the implementation of the scheme to ensure that the expenditure falls within that amount.

MAHATMA GANDHI UNIVERSITY

KOTTAYAM-686562

No.6721/88/All(1)/Admn .
Dated: 6-11-1992

NOTIFICATION

Ref: Notification of even no. dated 16/9/1992. It is intimated to all concerned that the last date for receipt of applications for teaching posts vide Notification referred to above, has been extended to **30-11-1992.**

DEPUTY REGISTRAR (ADMN.)

News from Abroad

Future Role of European Universities

Over 250 rectors and presidents of European Universities discussed the future role of universities in Europe at the second mid-term conference of the CRE – Standing Conference of Rectors, Presidents and Vice-Chancellors of European Universities in Bonn recently. The key issues of the conference, integrating knowledge, developing a research profile, preparing for employment and interacting with society, were dealt with in four separate discussion groups with a view to Europeanisation, the "sharing of ideas and resources between the various institutions of higher learning in all parts of Europe" and the "resulting European awareness to be developed in the different systems of higher education on the continent". Marijan Sunjic, Rector of the University of Zagreb, told participants that it was important to recognize the significance of the arts to the democracies emerging in Eastern Europe. Philosophy, politology and good ideas were even more important than technological aid. CRE president Hinrich Seidel criticized the European Community's Memorandum on higher education for not referring explicitely to universities. He said he was concerned that the memorandum did "not mention such a fundamental institution"

The CRE was founded in Dijon in 1959. It is based in Geneva, and now has over 500 members. In between its general assemblies, the CRE opens one of its bi-annual conferences to a larger number of participants from various higher education, governmental and industrial institutions to debate higher education issues.

Two Years Associate Degree

Students who finish two-year university level arts and science programmes at British Columbia's (B.C.'s) colleges in Canada will be granted associate degrees, as per the latest change introduced recently by the B.C. government.

"A two-year programme of academic study addresses the needs of many students in terms of personal development and career preparation," says the province's Minister of Advanced Education, Tom Perry. "An associate degree will allow students to enter the workplace with a recognized province-wide credential."

The two-year degrees were made possible by an amendment to the province's College and Institute Act. The change ensures that all colleges offering associate degrees have a common set of requirements.

The move to a new degree came following government surveys of students enrolled in university transfer courses at B.C. colleges. When the courses were orginally introduced about five years ago, the government had expected that most students would spend two years at a local college, then transfer to one of the province's universities. In fact, though, many did not. That left students with two years of study, but no credentials to show for their work.

"With a BA, everyone assumes you have a certain level of knowledge and education," points out Jerri Wilkins of the Ministry of Advanced Education, Training and Technology. "Now with an associate degree, employers will know what that means too."

The ministry has launched a public awareness campaign to tell students, employers and universities about the new degree option.

"It's not half a degree, or part of a BA," stresses Ms Wilkins. "It's a completely different degree."

Colleges could begin granting the new degrees as early as next spring.

AIU'S ANNUAL GENERAL MEETING

The 67th Annual Meeting of the Association of Indian Universities (AIU) earlier scheduled to he held from November 17 to November 19, 1992 at Pt. Ravishankar University, Raipur would now be held at Pondicherry University, Pondicherry on December 20, 21 & 22, 1992.

The change has been necessitated because of the continued disruption in the flight schedule.

The Vice-Chancellors/Directors of member Universities/Institutes are requested to kindly bear with us and to kindly note this change of venue and dates.

Secretary, AIU

RESEARCH IN PROGRESS

A list of research scholars registered for doctoral degrees in Indian Universities

SOCIAL SCIENCES

Library & Information Science

1. Chaube, Anurag. **A study of cognitive factors influencing the information processing behaviour of decision makers in relation to information systems.** BHU. Dr P Nath, Department of Library and Information Science, Banaras Hindu University, Varanasi.

2. Husain, NigarFatima. **Library communication and social development.** HS Gour. Dr R G Prashar, Prof and Head, Department of Library Science, Dr Hari Singh Gour Vishwavidyalaya, Sagar.

Sociology

1. Singh, Meera. **Intercaste marriages: A study in sociology.** BHU. Dr K D Dwivedi, Department of Sociology, Banaras Hindu University, Varanasi.

Political Science

1. Sushama Devi, A. **A study of the welfare measures of the Government of Kerala, 1987-91.** Kerala. Dr A Balakrishnan Nair, Indira Bhavan, Kollur, Kennammoola, Medical College, P O Trivandrum.

Economics

1. Atul Kumar. **Central banking in Nepal.** BHU. Dr M P Singh, Department of Economics, Banaras Hindu University, Varanasi.

2. Keshav Kumar. **Nepal ka videshi vyapar.** BHU. Dr M P Singh, Department of Economics, Banaras Hindu University, Varanasi.

3. Rai, Pradeep Kumar. **Socio-economic conditions of scheduled castes: A case study of Azamgarh District.** BHU. Dr Rajendra Rai, Department of Economics, Banaras Hindu University, Varanasi.

4. Saxena, Madhu. **Bharat mein niyamit bazar.** BHU. Dr (Mrs) M Srivastava, Department of Economics, Banaras Hindu University, Varanasi.

5. Singh, Parmendra Kumar. **A study of structure and function of regional rural banks in India with special reference to Kashi Grameen Bank.** BHU. Prof G S Kushwaha, Department of Economics, Banaras Hindu University, Varanasi.

6. Singh, Sarita. **Bharat ke gair paramparagat niryat kee pravritti tatha arthik vikas.** BHU. Dr Kiran Barman, Department of Economics, Banaras Hindu University, Varanasi.

7. Surendra Singh. **Role of GATT in tade promotion of developing economies.** BHU. Prof G S Kushwaha, Department of Economics, Banaras Hindu University, Varanasi.

8. Tripathi, Rajesh Kumar. **India's trade relations with EEC.** BHU. Prof G S Kushwaha, Department of Economics, Banaras Hindu University, Varanasi.

9. Verma, Basant Kumar. **M P ke Pashchim Nimar Jile mein karyarat adim jati sewa sehkari samitiyon ke karyakalapon tatha pragati ka mulyankan.** Vikram. Dr Vijay Parekh, Asstt Prof, Department of Economics, Vikram University, Ujjain.

Law

1. Deshta, Sunil. **Constitutional philosophy of lok adalatas in India: A study with special reference to Himachal Pradesh.** HP.Dr P L Mehta, Department of Law, Himachal Pradesh University, Shimla.

2. Jhingta, Hans Raj. **Corrupt practices unde the representation of People Act, 1991: A study of judicial interpretation and social perception.** HP. Dr B R Sharma, Department of Law, Himachal Pradesh University, Shimla.

3. Rish Pal. **Problem perspectives of bonded labour in India: An empirical study in the State of Himachal Pradesh.** HP. Dr B R Sharma, Department of Law, Himachal Pradesh University, Shimla.

Public Administration

1. Singhai, Dinesh Kumar. **Nagar sudhar nyas: Ek sansthagat vishleshanatmak adhyayan, Madhya Pradesh ke Sagar Nagar Sudhar Nyas ke vishesh sandarbh mein.** HS Gour. Dr S B Shrivastava, Reader, Department of Political Science and Public Administration, Dr Hari Singh Gour Vishwavidyalaya, Sagar.

Education

1. Indu Bala. **A study to examine therelationship between creativity and language developments in young children.** BHU. Dr Bhoodev Singh, Department of Education, Banaras Hindu University, Varanasi.

2. Mishra, Gulab Shankar. **Intelligence, academic achievements, socio status and personality charactersitics of elite wrestlers.** BHU. Dr S S Sharma, Department of Physical Education, Banaras Hindu University, Varanasi.

3. Rai, Vijai Kumar. **A comparative study of personality, mental ability and adjustment level of kabbadi and cricket players.** BHU. Dr Rambali Singh, Department of Physical Education, Banaras Hindu University, Varanasi.

4. Singh, Krishna Murari. **Development of communality among students of higher secondary schools.** BHU. Dr S D Chatterjee, D Department of Education, Banaras Hindu University, Varanasi.

5. Upadhyay, Nand Pd. **Chhatron kee shaikshik gatividhiyonper vishwavidyalaya chhatra-rajniti ke padane vale prabhavon ka adhyayan.** BHU. Dr P C Shukla, Department of Education, Banaras Hindu University, Varanasi.

Commerce

1. Awasthi, Vishal. **Evaluation of industrial relations system in U P and Maharashtra: A comparative study.** BHU. Dr Dipak Malik, Department of Commerce, Banaras Hindu University, Varanasi.

2. Baburaj, K R. **A study on the role of Kerala State Financial Enterprises Ltd as a financial agency for the economic development of Kerala.** Kerala. Dr K B Pavithran, Prof, Department of Commerce, N S S College, Nilamel, Kollam.

3. Banerjee, Sukanto. **Corporate reporting practices in public sector.** BHU. Dr S P Srivastava, Department of Commerce, Banaras Hindu University, Varanasi.

4. Gujrati, Sanjay Kumar. **Working of mutual funds in India with special reference to U T I.** BHU. Dr M N A Ansari, Department of Commerce, Banaras Hindu University, Varanasi.

5. Gupta, Sanjeet Kumar. **Financial performance of IDBI assisted companies in the private sector.** BHU. Dr M N A Ansari, Department of Commerce, Banaras Hindu University, Varanasi.

6. Jha, Dilip Kumar. **Bihar Rajya Audhyogik Vikas Nigam: Karyon ka mulyankan.** BHU. Dr Prashant Kumar, Department of Commerce, Banaras Hindu University, Varanasi.

Home Science

1. Bhagat, Simmi S. **Textiles and clothing: Creating technical awarness about selected textiles among consumers.** Delhi. Dr Anu Vermaand Dr Kailash Khanna, Lady Irwin College, Sikandara Road New Delhi.

2. Naug, Kanika. **Ecology of the Indian childhood in four different settings: Impact of parental social networks' on cognitive and social development.** Delhi. Dr Jayanti Datta, Head, Department of Child Development, Lady Irwin College, Sikandara Road New Delhi.

Management

1. Gopalakrishnan Nair, P. **A study of wholesale and retail marine fish marketing in Kerala.** Kerala. Dr V Mukunda Das,

Prof, Centre for Management Development, Thycaud, Thiruvananthapuram.

HUMANITIES

Philosophy

1. Katherine, Ziese. **Reappraisal of Advaita Vedanta.** BHU. Prof Kamalakar Mishra, Department of Philosophy, Banaras Hindu University, Varanasi.

2. Mishra, Kant. **Prakriti maya, sankhya evam vedanta ke sandarbh mein.** BHU. Dr S Vijai Kumar, Department of Philosophy, Banaras Hindu University, Varanasi.

3. Mishra, Manju. **Advait Vedant evam Sufimat ka sameekshatmak adhyayan.** BHU. Dr S Vijaya Kumar, Department of Philosophy, Banaras Hindu University, Varanasi.

4. Radhika, C S. **Philosophy of Advaita with special reference to Atmopadesa Satakam of Sree Narayana Guru.** Kerala. Dr M Sukumaran, Prof, Department of Philosophy, University of Kerala College, Thiruvananthapuram.

5. Rai, Rajeshwar. **Spinoja ke darshan mein Ishwar kee avadharana.** BHU. Dr D A Gangadhar, Department of Philosophy, Banaras Hindu University, Varanasi.

6. Rai, Vinod Kumar. **Yoga ke kriyapaksha kee khelon mein upayogita.** BHU. Dr K P Mishra, Department of Philosophy, Banaras Hindu University, Varanasi.

7. Singh, Madhurima. **Karma punarjanma aur moksha: Hindu tatha Bauddha darshan ke pariprekshya mein.** BHU. Prof B N Singh, Department of Philosophy, Banaras Hindu University, Varanasi.

8. Srivastava, Sushil Kumar. **Sampreshan: Samajik tantra evam mulya.** BHU. Dr A K Rai, Department of Philosophy, Banaras Hindu University, Varanasi.

9. Tiwari, Shiv Prakash. **Bhartiya darshan mein pratyaksha gyan.** BHU. Dr Urmila Chaturvedi, Department of Philosophy, Banaras Hindu University, Varanasi.

10. Upadhyay, Prabha. **Bauddha evam Yoga darshan mein samadhi kee avadharana.** BHU. Dr D B Chaube, Department of Philosophy, Banaras Hindu University, Varanasi.

11. Verma, Radhey Shyam. **Rashtriya ekta evam Gandhi darshan.** BHU. Dr Urmila Chaturvedi, Department of Philosophy, Banaras Hindu University, Varanasi.

Fine Arts

1. Kanak Lata. **Kashi ka Pashan ukeran.** BHU. Dr (Mrs) Kamal Giri, Department of History of Arts, Banaras Hindu University, Varanasi.

2. Prabha Kumari. **Prachin Bhartiya mrinphalakon per kathatmak chitran.** BHU. Dr Pratibha Prakash, Department of History of Arts, Banaras Hindu University, Varanasi.

3. Tarannum Fatama. **Banaras ka vastra udyog.** BHU. Dr (Kum) Rashmi Kala Agrawal, Department of History of Arts, Banaras Hindu University, Varanasi.

Sculpture

1. Rai, Bibha. **Dikyal murtiyan.** BHU. Dr Pratibha Prakash, Department of History of Arts, Banaras Hindu University, Varanasi.

Drawing & Painting

1. Chaurasia, Pramila. **Mithila kee chitrakala tatha samkaleen ahya kalayen.** BHU. Dr (Kum) Rashmi Kala Agrawal, Department of History of Arts, Banaras Hindu University, Varanasi.

2. Manju Rani. **Rajasthani shaili ke chitron mein Krishna ka ankan.** BHU. Dr (Kum) Rashmi Kala Agrawal, Department of History of Arts, Banaras Hindu University, Varanasi.

Language & Literature

English

1. Kanhaiya Singh. **Affirmation in the novels of Arun Joshi.** BHU. Dr R K Mathur, Department of English, Banaras Hindu University, Varanasi.

2. Singh, Priyamvada. **Christopher Fry: A study in dramatic art.** BHU. Dr R N Rai, Department of English, Banaras Hindu University, Varanasi.

3. Singh, Sanjay Kumar. **Sri Aurobindo: A study in dramatic art.** BHU. Dr R N Rai, Department of English, Banaras Hindu University, Varanasi.

Sanskrit

1. Anjana. **Jain darshan mein moksha.** BHU. Dr S L Jain, Department of Sanskrit, Banaras Hindu University, Varanasi.

2. Baby. **Someshwar Deo krit Kirti Kaumudi ka alochanatmak adhyayan.** BHU. Dr Sagarmal Jain, P V Research Institute, Karaudi and Dr Ramayan Pd Dwivedi, Department of Sanskrit, Banaras Hindu University, Varanasi.

3. Chaube, Nalin Kumar. **Sanskrit sahitya ke manglacharan - paddhyon ka alankarik adhyayan.** BHU. Dr Shiv Dutt Sharma Chaturvedi, Department of Sahitya, Banaras Hindu University, Varanasi.

4. Chaubey, Yugal Kishor. **Atharvaveda mein Agni: Ek alochanatmak adhyayan.** BHU. Prof V K Verma, Department of Sanskrit, Banaras Hindu University, Varanasi.

5. Dwivedi, Mamta. **Pratishakhyon mein varnotpatti: Ek sameekshatmak adhyayan.** BHU. Dr S K Mishra, Department of Sanskrit, Banaras Hindu University, Varanasi.

6. Jha, Vinod Kumar. **Rigveda ka Vrihaspati sukton ka alochanatmak adhyayan.** BHU. Dr R K Srivastava, Department of Sanskrit, Banaras Hindu University, Varanasi.

7. Kaumudi Kumari. **Rigveda mein Ashvin: Ek alochanatmak adhyayan.** BHU. Dr Usha Sharma, Department of Sanskrit, Banaras Hindu University, Varanasi.

8. Mishra, Devendra Kumar. **Jain darshan mein praman.** BHU. Dr Sagarmal Jain, P V Research Institute, Karaudi and Dr V K Varma, Department of Sanskrit, Banaras Hindu University, Varanasi.

9. Mishra, Shyamanand. **Kavya Prakash ke alok mein Rastaranginigat ras kee avadharna.** BHU. Dr R P Dwivedi, Department of Sanskrit, Banaras Hindu University, Varanasi.

10. Pandey, Ashwini Kumar. **Sankhyayogatantragam shastreshupratipadit hathayogasya vyavaharikoyayogaparisheelam.** BHU. Dr K K Sharma, Department of Vedic Darshan, Banaras Hindu University, Varanasi.

11. Pandey, Kamlesh Kumar. **Dustika: Ek parisheelan.** BHU. Dr J G Ratate, Department of Sanskrit, Banaras Hindu University, Varanasi.

12. Pandey, Ravi Prakash. **Samrthvad of Panini.** BHU. Dr J G Ratate, Department of Sanskrit, Banaras Hindu University, Varanasi.

13. Pandey, Shivaji. **Pramukh Sanskrit natakon mein rajnaitik tattva.** BHU. Dr J S L Tripathi, Department of Sanskrit, Banaras Hindu University, Varanasi.

14. Pandey, Vinita. **Rigveda pratishakhya ka uvatbhashyah: Ek alochantmaka adhyayan.** BHU. Dr S K Mishra, Department of Sanskrit, Banaras Hindu University, Varanasi.

15. Pathak, Ram Janam. **Atharveda ke ayushya sukton ka alochanatmak adhyayan.** BHU. Dr V K Verma, Department of Sanskrit, Banaras Hindu University, Varanasi.

16. Pratibha Kumari. **Swachchhand tantra: Ek sameekshatmak adhyayan.** BHU. Dr R S Chaturvedi, Department of Sanskrit, Banaras Hindu University, Varanasi.

17. Sharma, Binkatesh. **Rigved ke Vishnu evam Rudra Sukton ka alochanatmak adhyayan.** BHU. Dr Umesh Pd Singh, Department of Sanskrit, Banaras Hindu University, Varanasi.

18. Srivastava, Prem Chandra. **Purva mimansa aur Jain darshan mein praman.** BHU. Dr S L Jain, Department of Sanskrit, Banaras Hindu University, Varanasi.

19. Tiwari, Krishna Murari. **Bauddha darshan aur vedant ka tulanatmak adhyayan.** BHU. Dr S L Jain, Department of Sanskrit, Banaras Hindu University, Varanasi.

20. Tiwary, Yogendra. **Mantra-tantra: Ek sameekshatmka adhyayan.** BHU. Dr R S Chaturvedi, Department of Sanskrit, Banaras Hindu University, Varanasi.

21. Tripathi, Ramakant. **Dashrupaknatya darpanayoh vishya sameeksha.** BHU. Dr Chandramoli Dwivedi, Department of Sahitya, Banaras Hindu University, Varanasi.

Urdu

1. Khan, Diwan Asgar. **Khwaja Ahmad Abbas: Hayat aur khidmat.** BHU. Dr Abdul Salim , Department of Urdu, Banaras Hindu University, Varanasi.

Hindi

1. Anupam. **Kala cinema kee katha patkatha.** BHU. Dr Balraj Pandey, Department of Hindi, Banaras Hindu University, Varanasi.

2. Jalan, Anjana. **Naresh Mehta ke upanyas: Vastu aur shilp.** BHU. Dr V B Singh, Department of Hindi, Banaras Hindu University, Varanasi.

3. Mishra, Ramesh Kumar. **Agyeya aur unke upanyas.** BHU. Dr Rajmani Sharma, Department of Hindi, Banaras Hindu University, Varanasi.

4. Mishra, Ranjana. **Madhyakaleen samajik visangatiyan aur Tulsi.** BHU. Dr Ibha Gupta, Department of Hindi, Banaras Hindu University, Varanasi.

5. Mishra, Surendra Nath. **Hindi sahitya ke itihas granth: Alochanatmak vishleshan.** BHU. Dr Sudhakar Singh, Department of Hindi, Banaras Hindu University, Varanasi.

6. Pandey, Madhulika. **Adhunik kavya natak: Antar vastu aur shilpa.** BHU. Dr Rang Nath Pathak, Department of Hindi, Banaras Hindu University, Varanasi.

7. Pathak, Om Prakash. **Kedar Nath Agrawal: Antdrishti aur kavya.** BHU. Dr Chandra Kala Tripathi, Department of Hindi, Banaras Hindu University, Varanasi.

8. Rai, Jai Shanker. **Dumka, Bihar Anumandal kee pahari janjati kee boli evam sahitya ka adhyayan.** BHU. Dr Rajmani Sharma, Department of Hindi, Banaras Hindu University, Varanasi.

9. Ram, Shiv Shankar. **Shri Lal Shukla ke upanyason mein samajik chetna.** BHU. Dr R S Rai, Department of Hindi, Banaras Hindu University, Varanasi.

10. Shailja. **Mukti Bodh ka kavya srijan prakriya ke ayam.** BHU. Dr Indumati Singh, Department of Hindi, Banaras Hindu University, Varanasi.

11. Singh, Archana. **Hindi upanyas: Desh vibhajan ka sandarbh.** BHU. Dr (Mrs) Nirmala Kumari Varshney, Department of Hindi, Banaras Hindu University, Varanasi.

12. Singh, Renu. **Samkaleen Hindi kavita mein nari chetna.** BHU. Dr Kumud Prabha, Department of Hindi, Banaras Hindu University, Varanasi.

13. Singh, Savita. **Premchand ke upanyas sahitya mein badalate jeevam mulya aur nari patron kee samajik bhumika.** BHU. Dr C R Yadav, Department of Hindi, Banaras Hindu University, Varanasi.

14. Singh, Shree Kant. **Prasad kee kritiyon mein rashtriya chetna ka swaroop.** BHU. Dr R S Dubey, Department of Hindi, Banaras Hindu University, Varanasi.

15. Singh, Vinod Kumar. **Premchand ke katha sahitya mein swarajya kee chetna.** BHU. Dr (Mrs) Nirmala Kumari Varshney, Department of Hindi, Banaras Hindu University, Varanasi.

16. Srivastava, Rajni. **Chhayavad yugeen Braj bhasha kavya.** BHU. Dr (Mrs) Nirmala Kumari Varshney, Department of Hindi, Banaras Hindu University, Varanasi.

17. Sushma. **Harivansh Rai Bachchan ka kavi karma.** BHU. Dr Shambhu Nath Pandey, Department of Hindi, Banaras Hindu University, Varanasi.

18. Verma, Braj Bhushan. **Ramavriksha Benipuri ke natak.** BHU. Dr N Rai, Department of Hindi, Banaras Hindu University, Varanasi.

19. Yadav, Jawahar Pd. **Chhayavadi kavya mein hasya aur vyanga.** BHU. Dr Asha Pant, Department of Hindi, Banaras Hindu University, Varanasi.

20. Yadav, Subedar Singh. **Hazari Prasad Dwivedi ke upanyason mein sanskritik chetna.** BHU. Dr Rangnath Pathak, Department of Hindi, Banaras Hindu University, Varanasi.

Bengali

1. Dey, Sutapa. **Rabindranather rupak kabita o rupak galpa.** BHU. Prof S N Das, Department of Bengali, Banaras Hindu University, Varanasi.

2. Dutta, Soma. **Rabindra Nath O Hindir sant sahitya.** BHU. Dr (Miss) Bratati Chakravarty, Department of Bengali, Banaras Hindu University, Varanasi.

Malayalam

1. Ajeendranath, K R. **Mathaparavum Charitraparavumaya thakkan pattukal: oru padhanam.** Kerala. Dr V Gandgadharan Nair, Sub Editor, Malayalam Lexicon, University of Kerala, Thiruvananthapuram.

2. Chand Raj, M K. **Malayala bhasha prabhavam: Swathanthryananthara Keralathil.** Kerala. Dr S Rajasekharan, Department of Malayalam, Govt College for Women, Thiruvananthapuram.

3. Jayakumar, C. **Dramatic elements in the folk dramas of Kerala: A study.** Kerala. Dr K Appukuttan Nair, Meera Cottage, Ulloor, Medical College P O, Thiruvananthapuram.

Tamil

1. Vijayakumar, S. **Sociological study of Dr M Karuanidhi's novels.** BHU. Dr N A Bharathi, Department of Indian Languages, Banaras Hindu University, Varanasi.

History

1. Chopra, Prema. **Study of great-bladed industries of neolithic and chalcolithic cultures of North India.** BHU. Dr V Jayaswal, Department of Ancient Indian History, Culture and Archaeology, Banaras Hindu University, Varanasi.

2. Dhirendra Kumar. **Mahabharat mein Shiva upasana.** BHU. Prof Lallanji Gopal, Department of Ancient Indian History, Culture and Archaeology, Banaras Hindu University, Varanasi.

3. Dwivedi, Ravi Kant. **A study of functional aspect of bone and stone implements in Mid-Eastern Ganga Plains.** BHU. Dr Bhupendra Pal Singh, Department of Ancient Indian History,Culture and Archaeology, Banaras Hindu University, Varanasi.

4. Mukherjee, Soma. **Prachin Bharat mein Varahi pratima.** BHU. Dr P K Agrawal, Department of Ancient Indian History, Culture and Archaeology, Banaras Hindu University, Varanasi.

5. Pandey, Kameshwar. **Prachin Bharat mein samajik jeevan.** BHU. Dr Laxman Rai, Department of History, Banaras Hindu University, Varanasi.

6. Pandey, Pramod Kumar. **Jain sahitya mein Krishna katha.** BHU. Prof M Jauhari and Dr (Mrs) V Tripathi, Department of Ancient Indian History, Culture and Archaeology, Banaras Hindu University, Varanasi.

7. Singh, Vinod Kumar. **Madhya Ganga Ghati ka Bauddha kendron ka adhyayan.** BHU. Dr Mohd Naseem, Department of Ancient Indian History, Culture and Archaeology, Banaras Hindu University, Varanasi.

8. Tripathi, Vivek. **Swatantrata sangram mein, 1920 ke bad Vaisvara Kshetra, Raibarelly, Unnao-Fatehpur kee bhumika.** BHU. Dr Rajeshwar Pandey, Department of History, Banaras Hindu University, Varanasi.

9. Yadav, Sanjay. **Tughalak kaleen arthik evam samajik jeevan.** BHU. Dr S Banerjee, Department of History, Banaras Hindu University, Varanasi.

THESES OF THE MONTH

A list of Doctoral Theses accepted by Indian Universities

SOCIAL SCIENCES

Library & Information Science

1. Devarajan,G. **An investigation into the financing of the Kerala, Calicut and Cochin University libraries during the plan periods.** Kerala, Prof K A Isaac, Head (Retd), T C 17/25, Jagathy Thiruvananthapuram.

2. Kalburgi, Lingappa Bhojappa. **An in-depth evaluation of development of libraries and information services in the United Arab Emirates (UAE) after its independence: Possibilities, problems and current boundaries of building up an effective Library and Information Service System (LISS).** Karnatak, Dr C R Karisiddappa, Reader, Department of Library and Information Science, Karnatak University, Dharwad.

Psychology

1. Gogia, Manisha. **A study of anxiety as related to the severity of psychosomatic disorders, drug dependence, marital status and job satisfaction.** Garhwal. Dr (Mrs) Kamna Kumar, M K P College, Dehardun.

2. Shrivastava, Priyamvada. **Cognitive style in relation to educational interest, learning style and academic achievement.** Ravishankar. Dr O P Verma, Reader, School of Studies in Psychology, Pt Ravishankar Shukla University, Raipur.

Sociology

1. Agrawal, K K. **Baiga janjatiyon mein samajik gatisheelata: Samajshastriya adhyayan.** Ghasidas. Dr Shachi Jha, Govt Girls College, Bilaspur.

2 Dwivedi, Gokul Prasad. **Rewa Jile mein anusoochit janjati: Samajik parivartan kee prakriya ka adhyayan.** Awadhesh. Dr D S Baghel, Dean, College of Development Council, Awadhesh Pratap Singh University, Rewa.

3. Gulshetty, B S. **Impact of economic development messages on social structure in Rural India: A case study of Hudgi Village in Karnataka.** Gulbarga. Dr J L Hamilpurkar, Department of Sociology, Gulbarga University, Gulbarga.

4. Jain, Anita. **Karamchari Rajya Beema Yojana ke antragat ashrit** janhit labh; ek samajshastriya adhyayan: Jaipur Shahar ke vishesh sandarbh mein. **Devi Ahilya. Dr V M Munjal, B-Builders Colony, Park** Road, Indore.

5. Khare, Neeraj Kumar. **Hasdev Jhagra Khand kshetra ke janjatiya shramikon per koyala khan udyog ka samajik prabhav: Ek samajshastriya adhyayan.** Ghasidas. Dr Anil Kumar Pateriya, Department of Sociology, Ravishankar University, Raipur.

6. Nayak, Ramesh Chandra. **Land, labour and credit relationsA comparative study of irrigated and non-irrigated villages in Orissa.** NEHU. Dr V Xaxa, Reader, Department of Sociology, University of Delhi, Delhi.

7. Sidramshettar, Shakuntala Chandrashekarappa. **White colar marriages: A study of dual earner couples.** Karnatak. Dr A E Punit Prof and Chairman, Department of Sociology, Karnatak University, Dharwad.

8. Singh, Kamal Kumar. **Rewa Jile mein grameen netritva: Ek samajshastriya adhyayan.** Awadhesh. Dr J D Verma, Asstt Prof, Department of Sociology, Govt College, Amanganj, Distt Panna.

9. Singh, Rakhi Itu. **Social relation in hospitals: A study with special reference to Government Hospitals in Jabalpur District, State of Madhya Pradesh.** Durgawati. Dr C S S Thakur, Head, Department of Sociology, Rani Durgawati Vishwavidyalaya, Jabalpur

10. Tripathi, Abha. **Shikshit mahilayon kee samajik sthiti: Bilaspur Nagar kee gair kamkaji mahilayon per adharit ek samajshastriya adhyayan.** Ghasidas. Dr Shachi Jha, Department of Sociology, Govt Girls Postgraduate College, Bilaspur.

Social Anthropology

1. Bhatia, Kiran. **Family power structure: A comparative study of rural and urban women of Haryana.** Panjab.

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Focus on Functions

Shivendra K. Verma*

Language is central to the whole process of education and is the principal means of cultural transmission. Most of the students who fail in the present educational system fail because they do not have adequate proficiency in language. They do not know how to use and communicate the knowledge that they have. What they need to acquire is the ability to use their mother tongue and other tongue(s) to perform a variety of roles and tasks. In a multilingual society (ours is a multilingual society), their success depends to a very great extent on their ability to switch their linguistic gears as many times as they play different personal, interpersonal, and institutional roles in different settings. It also depends on their acquiring different levels of proficiency in the languages they use.

The Indian linguistic scene has tempted researchers to call India 'a sociolinguistic area', 'a linguistic giant' and 'a language laboratory'. The multilingual and pluricultural nature of the socio-cultural settings in India makes it clear that it needs more than one language for 'national cohesion', 'cultural integration' and 'social and areal mobility'. It needs not just one link language but layers of interrelated link languages : an intrastate link language, an intranational link language, and an international link language. It is theoretically possible to have more than one link language or official language at any one or more levels. Different languages have different roles to play. The mother tongue or first language (L1) has a role to play; the regional language has a role to play; Hindi as an international official language has a role to play; English as a second language (L2) and as an international link language has a role to play; foreign and classical languages have roles to play. Here the term 'role' means a cluster of roles. These roles are complementary. These languages along with the roles assigned to them can and should coexist peacefully and act like binders, binding the states into one whole called *'Bharat'*.

We must make a distinction between the following notions : 'national language' and 'official language'; 'official language' and 'associate official language'; 'national official language' and 'state official language'. All the languages of India have the status of national languages. Hindi has, in addition, been given the status of 'Official Language' and English of 'Associate Official Language' at the national level. (The Official Language Act of 1963 decreed that English was to continue as an Associate Official Language). The dominant languages of the States function as official languages and also as the medium of instruction in their respective states. The Constitution of India provides full freedom to the states to choose a language or languages in a region as 'official' language(s) [Article 345]. It also allows linguistic minority groups to receive education through their mother tongue and set up institutions of their own for their education [Article 30].

Now we move on to 'English in India'. English has been used for years as an associate official language, an associate intranational link language restricted to English-based educated bi/multilinguals, an associate medium of instruction and examination at the tertiary and post-tertiary levels, and also as the main international link language. It is being used by all-India agencies like Akashvani, Doordarshan, Airlines, Railways along with Hindi at the national level and along with the regional languages at the state levels.

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At the moment it is functioning as our most effective link with expanding universe around us. It enables us to have access to the growing store of knowledge in science, technology, social sciences and humanities. It functions as a 'resource language', 'a language of development', and as a language of 'upward socio-economic mobility'. It also enables scholars outside the country to have access to Indian philosophy, Indian religion, Indian culture, Indian patterns of life and thinking, and India's explorations in the field of knowledge. Our scientists, technologists, engineers, doctors, economists, and the researchers must be able not only to have access to professional literature in English but also be able to contribute to it and to communicate with their counterparts in other parts of the world. We must have a fairly high degree of competence in English if our science and technology, trade and commerce, are to be truly international. It is clear therefore that English has important functions as an 'associate official language', an 'international link language', as a 'source language',and as a 'bidirectional window on the world'. A survey of the use of English in the world today makes it clear that it is used by 403 million people as their first language and by 1.5 billion people as their second language. In 60 countries it has the status of official language. 12 countries have adopted English as their effective second language (L2). Even countries like Japan and China have realized the importance of English as an international language and have therefore built it into their language teaching programmes. This is also the reason why the Government (of India) documents presenting educational policies and programmes at the national level have emphasized the need for the effective teaching and learning of English in India within the framework of the "Three Language Formula". These documents are : *Challenge of Education : A Policy Perspective*(1985), *National Policy on Education*(1986), *Programme of Action*(1986), *Report of the Committee For Review of National Policy on Education*(1990), *Towards an Enlightened & Humane Society*(1990), *National Policy on Education with Modifications*(1992), *Report of the CABE Committee on Policy*(1992).

In order to translate these polices into action, we must devise a set of strategies for reorganizing the teaching of English at different levels keeping in view the roles and functions assigned to it viz-a-vis the roles and functions assigned to Hindi and the dominant state languages. The objectives of teaching English as a second language in India must be formulated in the light of what we perceive our needs for English to be in a multilingual setting. This formulation will emerge in response to our answers to the following questions : What are the roles assigned to Hindi, English, regional languages, classical languages, foreign languages, and the languages of the minority group? What are the topics and situations that will necessitate the use of English? What is the kind and amount of English that the learners will need at different levels? The point to be emphasized here is that teaching English as a second language in India is a complex process of helping learners learn 'how to mean' in a new socio- cultural setting. Our ultimate objective should be to enable them to select and use different varieties of English effectively and efficiently according to the topic of discourse, addresser-addressee relationship, and socio-cultural setting. They must move slowly but surely in the direction of deciding on their own "what to say when and how". The level of active command to be aimed at should be adequate both for those who wish to pursue higher education in English and for those who terminate their education at the end of the secondary stage and wish to enter upon a career. We must identify the English requirements of various groups of students precisely, and try to provide for each such group the pattern of courses which will be relevant to their needs. This is important because not all students will need English to the same level of competence. It is also important that special programmes are designed to help the weaker sections of society acquire an adequate competence in English so that they do not remain for ever disadvantaged in areas of education and in terms of upward socio-economic mobility. It may be useful from this point of view to initiate a set of interrelated activities : analysing learners' needs, designing syllabuses on the basis of needs analysis, producing new teaching materials, reforming the system of evaluation, and organizing orientation and refresher courses for teachers : courses with their main focus on teacher development. These courses should make the teachers of English familiar with the philosophy underlying the new movement and the ways in which they can make use of their creativity in handling the new teaching and testing materials. Keeping in view the needs of different types of learners (learners with no English, learners with six to eight years of frozen/passive English, learners with fractured English and learners who have had their entire education through the medium of one of the regional languages), the system should offer a variety of courses in English at a number of levels – courses organized not in terms of years but in terms of effective contact hours : English 150, English 200, English 300, English 400 and so on (150, 200, 300, 400 hours of English in action). The system must also provide for bridge courses, remedial courses, enrichment courses, and also courses for those who have had no English so far but would like to learn it at the end of the secondary level in order to be able to do tertiary level courses through the medium of English.

A Paradox

In this area as in a number of other areas India presents a paradox : linguistic depression in the midst of plenty. We have nearly two hundred university level institutions, more than 7000 colleges, National Council of Educational Research & Training, State Councils of Educational Research and Training, Regional Colleges of Education, Teacher Training Colleges & Institutions, Central Institute of English and Foreign Languages, Regional Institutes of English (RIE), State-level Institutes of English, District Centres for English, English Language Teaching Cells/Centres attached to some of the Postgraduate Departments of English and yet there is a marked and progressive decline in the learners' level of competence/proficiency in English. At every level (secondary, plus two, undergraduate and postgraduate) teachers have to organize 'bridge couses' and 'remedial courses' for nearly 50% of the students in their classes. This gives them very little time to do 'enrichment courses'. There is also a fall in the standards of the teaching of English at different levels. This downward trend began as early as 1921, since from that time on the medium of instruction has been moving from English to the mother tongue/the state official language. As a result of this move learners are exposed to a very restricted variety of English for a very limited period of time in their classrooms. The point to be underscored here is that exposure to a rich variety of linguistic material is as important in first language acquisition as in second language learning. This means that the planners of English language teaching programmes must think in terms of producing two packages : (i) a package of materials for learners designed to expose them to a variety of contextualised language materials in print and on audio and video cassettes; (ii) a package of materials for teachers designed to update their knowledge and show them how they can use modern methods and techniques in their own ways for helping learners get the best out of the package meant for them.

One of the main reasons for the fall in standards is that we have not been able to formulate our language policy in clear terms and the three language policy has been nullified by "Angrezi Hatao" and "Hindi Bhagao" movements. At the moment our policies and programmes for introducing changes in the teaching and learning of English at the secondary level do not get full support at the state level leading to frustration, helplessness, and loss of faith in the system. For the effective teaching and learning of languages, it is very essential to set up a National Council of Language Education as an apex, policy making body with a network of State-level Councils. This networking may help the policy-makers and organizers monitor the implementation of their decisions and programmes.

The following measures are suggested in order to improve the standards of the teaching and learning of English at the secondary level :

(i) In view of the limited trained manpower that we have and the new roles and functions assigned to English, the teaching of English as a compulsory subject should not be introduced earlier than the first year of the secondary stage. We do not have at the moment the resources to produce properly trained, competent teachers to teach English at the primary and middle levels. In the hands of trained graduate and postgraduate teachers it may be possible to achieve good results at the secondary level in 400 hours of effective teaching (This suggestion – 400 hours of English – is based on the work done on the project on *English 400* at CIEFL). Modern researchers support the view that children can acquire English more readily after they have achieved a fairly good level of competence in their first language (L1). The two points that need to be emphasized here are : first, the effectiveness of language teaching depends not simply on the length or duration of the programme but to a great extent on its quality and intensity. Secondly, children in the age group 13+ learn second/foreign languages faster than primary school learners because of their higher level capacity for reasoning, for hypothesizing, and for rule formation.

(ii) Since our teachers of English receive their basic training in the use of English Language & Literature at the college and university levels, their graduate and postgraduate programmes must be modernized and tailored to their needs.

(iii) A national committee of experts should be set up to modernize the English component of the B.Ed. & M.Ed. courses and also of the training courses offered by the English Language Teaching Institutes (ELTIs). It is a pity that the word 'training' has acquired bad odour about it. 'Training' in our sense of the term is not a process of 'packing' and 'polishing' but of 'unfolding' – a process of self-development based on 'innovation' and 'exploration', for we feel that a good teacher plays the role of a facilitator', a leader of a cooperative enterprise in which development takes place through reciprocal give and take, the teacher giving but also willing to receive. Teacher development courses should therefore have at least three interrelated and mutually reinforcing components : (a) a curse designed to help teachers update their knowledge and improve their English; (b) a course designed to make them familiar with new methods and techniques including the use of distance mode and mass media; (c) a course designed to help them handle human and linguistic resources with care and understanding.

(iv) Every secondary level teacher of English should be encouraged to go in for a full training course in the teaching of English followed by orientation and refresher courses. Those who complete these courses successfully should be rewarded with an upward movement in their scale of pay.

Futurology Course at Graduation Level

Development of Curriculum Outline Through DELPHI Method

Sanjay L. Mahajan*

Introduction

Futurology has emerged as an area of interdisciplinary study. In the world of fast changing knowledge and technology this has been a major concern for the enlightened groups to be cautious about the challenges to be met in the future. The study of futures is very essential from the point of view of building our own futures and facing the challenges of unavoidable circumstances in the future. Futures are linked with the man and society, also different fields of discoveries and their applications. Unless man is futuristic it is sure that he is nowhere in the fast changing world. Futurology, the study of futures can save the man and society from this crisis.

It is high time for education to be future oriented and thereby producing the youth to meet the future trend of life in the context of higher education. Moreover futurology can help planning and management of social and educational systems to bring about anticipated developments at a fast speed.

Of late the University Grants Commission (UGC) and the Department of Science & Technology (DST), Government of India, have been making serious efforts to introduce futurology as a subject of study at different levels of higher education. A few universities like Devi Ahilya, Bharathidasan, and Osmania have already come out with different futurology courses at graduate, postgraduate, M.Phil and B.Ed. levels. There is a strong demand for introducing futurology course at graduate and postgraduate level in other universities as per approval of the UGC.

With a view to support this venture here is an effort to develop a curriculum outline for futurology course at B.A./B.Sc./B.Com./B.Tech. levels using DELPHI method.

Objective of the Study

The study has been conducted with the following objective :

To study the experts' opinion on introduction of futurology at higher education stage in the country in terms of relevance, time, form, course content through DELPHI method.

Methods and Procedures

DELPHI is treated as a popular method of conducting studies on developing curriculum. This is a method through which the experts' and participants' opinions are sought on different units of curriculum through different round surveys till the final and most homogeneous finding is arrived at.

Instrumentation

One questionnaire was prepared with eight components to collect necessary data for achievement of the above objective. These components were :

1. Relevance perceived by the experts
2. Time of introduction
3. Form
4. Course contents.

The items for these components were finalized on the basis of seminar documents available on the course contents of futurology at higher education stage, and different curricula available on futurology course in different universities.

There were close ended questions and open ended questions. Usually most of the questions were supplied with three point rating alternatives, such as 'relevant to a large extent', 'to some extent', and 'not at all'.

Population, Sample and Data Collection

In DELPHI method, as stated earlier the experts and participants of a programme were treated as the respondents of various questions. In this study the population of respondents was restricted to all the coordinators of futurology units in 87 universities and institutions of national importance in India. The participants of futurology seminars and summer courses of futurology held in different parts of the country. For the present study the initial sample was restricted to all the 87 coordinators of "Technology Forecasting and Futures Studies Unit", 26 participants of "Workshop on Policy and planning for futures of societal systems" held at Hyderabad during Nov 1986, 49 participants and resource persons of Autumn School of Futurology in Education held during 24th to 30th September, 1988 at Indore. In all 112 persons were contacted by post by sending them printed questionnaires. Besides these, 36 localities were contacted in person for data collection by the investigator. 73 persons (49 percent) responded to the first round data collection.Thus these people constituted the final sample of the study.

The second round data collection was restricted to 15 persons out of 73, who had given extreme end responses. They were contacted to reconsider their earlier responses keeping in view the total responses of the first round survey. All of them returned the questionnaires duly filled in. In all the total sample comprised 73 respondents. These respondents belonged to reputed institutions all over the country.

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Scoring and Analysis Procedures

The data collected through close ended questions were of three point rating scales with the alternatives of relevance perceived 'to a large extent', 'to some extent', and 'not relevant at all'.

These alternatives were scored using the norms of two, one and zero, for to a large extent, to some extent and not relevant at all alternatives respectively. In the rest of the cases the close ended questions responses were put in some specific forms of responses which were analyzed in percentage form. The rating scale responses were analyzed by making use of Median and Quartile techniques.

Major Findings of the Study

The study revealed the following findings on different aspects of investigation :

Relevance of Futurology Course at University/College Stage

Experts have strongly favoured that the futurology course must be introduced at higher education level (Median value of 1.89 in a three point rating scale of 0, 1 and 2.) The main reasons for introduction of this course as specified by them were to train the present generation of the learners to be futuristic, to produce future oriented teachers for tomorrow, and to prepare the personnel for planning and management activities.

Time of Introduction of Futurology Course

A large majority of respondents (60 percent) have been very optimistic for the year of 1989-90 to start with futurology course at higher level in different universities and colleges. Of course around 33% of respondents favoured 1994-95 to be the year of introduction of futurology course at colleges and universities.

While the former responses were supported by the reason of sooner the best, late means lacking behind; the latter response was supported by the reason that by 1994-95 adequate preparation can be made from the point of view of financial and human inputs.

Introduction of Futurology at Different Levels

In order of preferences (27% to 47%) of respondents, it was found that futurology should be introduced at postgraduate level as special papers, interdisciplinary course at M.Phil. stage, compulsory paper at graduate level and at B.Ed. level. This shows that futurology must be accommodated at different stages of higher education. Moreover most of the respondents (75%) favoured that the above courses at postgraduate and undergraduate levels should cover all the faculties.

Course Contents of Proposed Curriculum

UNITS

1. The meaning, nature, concept and characteristics of futures studies.
2. Needs and significance of futures studies.
3. Types of futures and scenarios.
4. Needs and concepts of technology forecasting and technology assessment.
5. Methodology for futures scanning, qualitative and quantitative, like
   - i. Brain storming
   - ii. Trend-Extrapolation.
   - iii. Delphi.
   - iv. Simulation Model.
   - v. Cross-Impact Analysis.
   - vi. Seth-Harva Method.
   - vii. Relevance Trees.
   - viii. Morphological Analysis
   - ix. Computer Modelling.
   - x. Case studies.
   - xi. Other Methods

   Meaning, steps involved, assumptions uses and limitations of each of the above methods.
6. Management of change – future oriented management – planning – Specification of goals and specification of plans – Long range Planning, Strategic planning, Corporate goal setting, generating alternative.
7. Systems Analysis : Methodology of systems analysis and techniques of systems analysis.
8. Impact of different technologies on different walks of life, social impact analysis e.g. in health, living standards, life styles, cultural impacts, psychological impacts, community values, religious, historical and other interests.
9. Environmental Impact Analysis (EIA) – Procedural issues, substantial issues, identification of ecological parameters, hands/air/water/ noise/ radiation/other system linkages.

This was observed that all the items have been given higher weightages with Median values varying from 1.10 to 1.73 in a three point rating scale of 0, 1 and 2 values.

Conclusion

The curriculum outline generated through this study will act as a guide to the universities and institutions of national importance to introduce futurology course at graduation level. Of course, on the basis of local specific situations modification can be brought into the proposed curriculum outline. Further studies conducted in this area can strengthen the efforts of introduction of 'Futurology' course at higher education level.

References

Henchley, S.P. & Yates J.(1985), Futurism in Education: Methodologies. Berkely – California : McCutuchan Publishing Corporation.

Linstone H.A. and Turoff M.(Eds.) (1975), The Delphi Method Techniques and Applications. London:Addison Wesley Publ. Co.

Report of the Committee on Futurology of Education (1978). Department of Science & Technology, Govt. of India, New Delhi.

Sahoo,P.K., & Passi, B.K., (1988), Futurology in Education, Agra Book House.

The Loss of Academic Environment
Are We Teachers More Sinning Than Sinned ?

Indrajit Bhattacharya*

Who Hesitates ?

Doesn't it seem that the members of the teaching fraternity, pulling the yoke of the present day education system, are gradually losing their academic motivation? Raising the questions of students' unrest and government's deaf ear they seem to guise their own flaws and apathy. The present day education policy is not something baseless nor does it ignore the very participation of those who are directly connected with the processes of day-to-day teaching-learning. The schools, colleges, universities and other institutes seem to lack the required academic environment. Although it cannot be denied that government has scarcely succeeded in creating a scope of matching avenues of employment, it does not mean that the various academic and technical skills, ability, excellence etc. do not have any implications whatsoever. Apart from a few short lived and scarce glimmers one, however, fails to discover any overall, deep rooted or total dedication from the end of the teaching fraternity to the cause of one's academic excellence.

Who Behaves ?

How unacademic have we become! None of us endeavours to work out any structural changes which could rebuild the system so as to make us feel that whatever percentage of government revenue is allotted to the department of education is not going in vain. In fact, this is such a sector which creates the backbone of the country's economy after a long gestation gap. The teachers themselves, being the part and parcel of the education system, ought to take the responsibility of its thorough evaluation. They should not, however, forget to evaluate themselves too. Why do students lack their interest in taking higher education? Why do parents not send their children to get educated? Why do academic standards differ so acutely from student to student, school to school, college to college and university to university? Why are there acute differences of academic standards among students passing out from the same university? How could the students acquire various degrees and diplomas without having acquired the requisite proficiency and without succeeding in attaining the pre-decided objectives? It seems they lack the required intellectual food and a true academic motivation. The present day education system and its brunt bearers, perhaps, lack the very significance of the academic motivation. Perhaps, we are at fault while taking the implication of education to the mind and heart of the student fraternity. Perhaps, we cannot make them understand the importance of education. Perhaps, we do not do anything academic to make their minds work academically. Perhaps, in the name of modernity we have distorted the very need of getting educated. What do we do? Have we ourselves understood the very nature of academic behaviour?

Who Initiates ?

The author thinks that the teaching fraternity itself has grown a distaste for education. Like any other clerical job, education process, that is, the involvement of teachers and students have become confined merely to classroom teaching. A teacher assumes that his work at school or college or university ends with the completion of the allotted workload of teaching periods. However, the kind of interaction between students and teacher is not given proper attention. What we ought to exemplify with regard to academic behaviour has no meaning at all. Do we contribute to the overall personality built-up of the students? In the name of curriculum we have very many things to do. We frame syllabi for various standards at schools, colleges and universities. We do the evaluation of students, their knowledge and their performance. We evaluate them weighing their performance framing our marking scale. Our evaluation, in spite of its structural lacunae, measures the range of their acquisition of the pre-determined objectives. But, even after taking the examinations, acquiring degrees and diplomas they differ acutely from each other. They sometimes even become doubtful about the very system of evaluation.

Who Works ?

Looking at the condition of the institutes, schools, colleges and universities we discover that the courses and syllabi lack the very vein of further academic interests. The academic interests remain confined to acquiring degrees and diplomas only. The teaching fraternity which is getting more and more unacedimic also speaks of the kind of education they themselves have undergone. The present day education system has also created an atmosphere of examination oriented teaching learning situation in which the aspects of knowledge, perception, thinking do not have much significance whatsoever. Most of the teachers themselves do not want to do any academic work. It seems that they lack the very academic urge to do something. Even if some of them are found doing research there are very few who could claim to have made any substantial and original contribution to their respective fields which could further and facilitate newer lines of research activities. In the fields of humanities, the research projects are mostly confined to compilation and arrangement of facts, whereas, in the field of social sciences, the researchers are confined to doing some surveys which hardly point to any scope for further research or broaden the field of understanding and knowledge. Although a major portion of UGC funds is allocated for various projects, granting various scholarships and fellowships, it is quite unfortunate that the majority of the theses in different universities rarely show any promise. Even if research projects are carried out by very many college and university teachers their works have hardly any significance nor do they bring forth any improvement in their teaching techniques. So such projects very rarely succeed in boosting up the academic interests of the students. After completing such research projects they do not seem to sustain even their own interests in doing something further. In this regard we need not now bring the fact of various mal-practices and manipulations in Ph.D. work into consideration which we hear very often.

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Who Learns ?

The high school teachers and junior college lecturers, as we know, have to undergo teacher training courses. If the syllabi of B.Ed. courses in various universities are studied we discover that they hardly delineate any structural changes incorporated within in the last two decades. The teachers who need to have a change in their outlook and justification with changing times therefore do not seem to get any methodological help in this regard from these training courses. In fact such training courses should be so modelled that teachers could change their techniques and methodologies of teaching with the changing times. Isn't it strange to observe the fact that a teacher keeps on pursuing his teaching without thinking of making any academic improvement and without adapting to any methodological changes in his teaching till his retirement? How could the outmoded teaching techniques suffice his teaching to last till his retirement? How could the same academic qualification be adequate for years together? The author believes that this status quo is the most significant reason behind the loss of academic environment in schools, colleges and universities. Such continuance not only over-simplifies the process of teaching but also makes it dry and drab. Although every step brings newer information to the new batch of student fraternity, the methodology remains as it is. The author, however, does not diregard the fact that teachers do improvise their teaching techniques from time to time catering to newer experiences. But, yet, they experiment their improvisations with such a batch of students that a true evaluation of these improvements cannot be done. For college and university teachers, UGC has undertaken the programmes of orientation and refresher courses. But, is there any appraisal methodology to measure their methodological improvisation after they have undergone such courses? Do these programmes secure informations of these sorts of changes from their participants? (if there are any).

Who Withdraws ?

The opening up of newer fields of studies does not mean unnerving the existing fields of studies. Every field ought to be equally challenging and equally absorbing – lest we have to encounter such situations when students would be found to prefer such fields which are novel and such fields which would be more job oriented than other fields. The question of saturation of a particular field of studies is also related with the policy making of the economy, the economic development and the modernization of the country. In this regard the government must take appropriate measures to withdraw the studies of those fields which are gradually losing their immediate effectiveness in terms of their utility in producing a section of potential human resources. However, that does not mean that their academic value should be ignored. Nevertheless, this is to be done only with those fields in which it is absolutely difficult and impossible to sustain their vividness and novelty.

Who Builds ?

To build up an academic environment the academic behaviour of the teachers is to be paid attention to. At the Board level appropriate committees be formed in every district comprising the nominated members, particularly, the academicians who would look into the academic activities of the teachers in schools and junior colleges. Increments, promotions and upgradations of teachers should be directly linked up with their academic activities. Here, preference should be laid on their qualitative work over their quantitative work. All teacher training courses should be restructured every three years so that teachers could be trained in accordance with the needs of changing times and changing scenes. Various workshops be organized in which the academic and innovative activities of the teachers be discussed. At the Board level the curriculum should be remodelled and framed every year. Apart from teaching syllabi various other activities should be made compulsory to every teacher in schools which should be thoroughly and seriously evaluated. At the college and university level syllabi are to be restructured every year stressing their long term utility by a high level committee formed out of academically oriented teachers from different regions. Every college must be asked to publish a quarterly research journal of its own in which each member on the staff has to contribute a piece of work of innovative kind every academic year. The same is to be followed in the university too considering it as a unit. And every year a seven day conference be organized in which all these papers be read and discussed. At the end of every year such publications of all universities together be anthologised and distributed to all the colleges affiliated to every university so that each and every teacher must learn about the kind of academic activities being carried out in different universities. For the teachers of schools, colleges and universities a six-monthly increment or incentive scheme should be evolved which would encourage and enhance their academic activities and which would reflect on their improvements in teaching techniques meeting the changing times. Fellowships, scholarships and grants be awarded for those kinds of work which are more innovative in nature than those kinds of work which are carried out simply for the sake of research. Various research contributions be included in the syllabi consistently at the postgraduate and undergraduate levels depending upon their academic value. Similar attention be paid to, when the syllabi of various Boards at matriculation and +2 levels are framed. Such a string of events would certainly succeed in evolving a uniform system of education and subsequently create the required academic environment in schools, colleges and universities among both students and teachers.

Community Based Extension Service in Universities and Colleges

Design and Methodology

Haripad R. Subramania Iyer*

Extension service through its many educational programmes and activities intends to bring about changes in what people do and also in their knowledge, interest, understanding, attitudes and skills. Similarly, their participation refers to a special form of interaction and communication which implies the sharing of powers and responsibilities.

Community based extension service deals with active involvement of beneficiaries in the extension service which is at the micro level, democratic, target-oriented and involves participatory approach in order to achieve all the objectives of planning.

Guidelines

In order to initiate community based extension service, we need to follow the guidelines given below :

1. Evolve a decentralised, bottom up and a widely participating mechanism in order to institutionalise community based extension service and to induce the local people for involvement, interaction, initiation and planning for extension service for their development by means of self organisation and self help instead of charity and welfare approaches which attempt to channel aid to people to help themselves. Towards this end, we have to develop models for organisation and group action.

2. Develop a built-in grassroot extension mechanism and effective conversational communication strategy so as to arouse their awareness and create a self-reliant organisation.

3. Develop a bottom up system of information and response in order to convey the right knowledge, information and innovations, relevant to the local people systematically, interestingly and acceptably through the appropriate media at the appropriate time with the right person and to ascertain the responses or reactions or feelings from them.

4. Design data collection and processing system (sources and methods of data collection and recording).

5. Design flow of information (data analysis, communication and feedback).

6. Develop a buit-in monitory system to keep close and constant watch on the progress of programme implementation which has to be undertaken by the implementing agency itself so as to ensure the timely completion of the programme within the sanctioned outlay.

7. Develop independent and competent evaluation mechanism for evaluating performance, measuring outcomes and accounting for variations between objectives and results.

8. Identify the area of operation (the area to be selected for extension service).

Methodology

Undertake reconnaissance visit through the area of operation and meet the local people and their leaders. Inform the people the purpose of the visit. Have preliminary interaction with them and establish good rapport with them. Develop trust and confidence and thereby elicit required information on the local situations.

Conduct a comprehensive survey of all the households in the selected area in order to have an indepth knowledge of local needs, problems, priorities or preferences, conditions, and possibilities and the extension service available in the area.

Identify the programme participants and encourage group formation and self help group.

Educate, motivate and equip them with sufficient information and tools to facilitate meaningful participation in the programme of extension service, knowledge sharing and empowerment to facilitate self development efforts by individuals, groups and communities.

Start at the stage of deciding what to do and how to do it and continue throughout implementation, allowing feedback control and adjustments.

Ensure people's participation in planning and strategic decisions in the form of generation and refinement of ideas about what should be done before they come to formal decisions, formulation and assessment of options and making choice about them and formulation of plans for putting selected options into effect.

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Involve the participants in the collection of relevant, accurate, timely and usable data and information much of which can flow only from the local people and their leaders and which must reach the right persons at the right time in a way that he/she can make rapid use of it for making useful assessment for judgement and decision making and execute it on time.

People's participation in the initial, ongoing and operational decisions which affect them and which have to be made in the process of planning.

People's participation in making the initial decisions in the form of associating the participants in providing information on the real needs and priorities, where to start or where the project should be located, what to do or what kind of extension service they need for their own development, and how to do it or how to undertake extension service effectively, the ways in which it should be financed and staffed, the path by which they participate in the extension programme and the contribution they are expected to make.

People's participation in the ongoing decisions which may have to be taken by various people in the locality, namely, identification of new needs and priorities that the project might respond to may occur thereby helping to shape the directions in which a project evolves as well as in operating the project in ways that best meet the needs of the participants.

Involve them in decisions on the structure and content of activity once begun, if such flexibility is allowed. People's participation in operational decisions in the form of associating non-governmental, voluntary and other organisations with the extension activity that have significant input into its performance, their operation and the decisions concerning the organisation (membership, meetings, leadership, selection, control over personnel and initiatives for contacting and lobbying). Design need-based programmes of extension service. Formulate objectives in terms of behavioural changes in the people who are to do the learning or help bring about changes in what people do and changes in their knowledge, understanding, attitudes and skills. Relate the nature, content and timings of the extension service to real needs and problems as well as take into account the interests of the participants thereby proving effective in meeting felt development needs and sharing all benefits equitably. Determine the approaches, pursue appropriate strategy measures and the methods and techniques of the programme or ways and means of achieving the goal and objectives of the programme by which the efficacy of the programme will be measured.

Prepare guidelines for programme efforts or activities to be undertaken regularly or intermittently which are essential for the success of the programme (inputs, pre-conditions, complementary, supplementary and supportive systems or activities).

Programme performance which refers to the level of achievements of target and objectives (output), programme process (how the effect was achieved) and the real impact i.e. the effects of programme efforts and programme performance, changes in the level of the distribution of benefits of extension service, changes in the level of local economy that arise from programme activities and performance (developmental change).

Develop empirical indicators of input, output, effect and impact. Determine empirically verifiable measures of goal achievement. Fix the role and responsibility of both the programme participants and the extension agency before the programme starts. The role of agency is to facilitate the performance of people's functions more efficiently by providing technical and financial advice or inputs and to create facilities for the success of the programme formulated by the participants.

Prepare an action plan or detailed plan of work and budget for undertaking extension service, taking into account the quantum of funds, time and facilities available and the personnel engaging village survey and extension services that are adequately motivated and have the necessary attitudes, skills and leadership qualities.

Establish an effective two way channel of communication between the agency and the participants.

Implementation of the Programme

Disseminate modern scientific and technical knowledge, information and innovations, facts and data relevant to the local people through appropriate media in order to satisfy the real needs of the people at large and to activate them towards self motivation and enhanced production in the rural economic activities, and better use of physical, human and financial resources resulting in equitable and sustainable rural development.

People's participation through resource contribution either to create infrastructure or to build other assets including knowledge which can take a variety of forms such as contribution of free land, labour and material goods, cash or funds from the local people (inputs) and moral commitment by the local people.

People's participation in administration and coordination efforts in the form of giving adequate representation to non- governmental, voluntary, non- bureaucratic, religious, cultural and other community organisations in the various advisory and decision making bodies thereby helping the agency to demonstrate and coordinate the programme and results in increasing their self reliance and giving the staff valuable insight, information on local problems and constraints affecting the progress. People's participation in benefit sharing is in the form of individual benefit – an increase in per capita consumption, income and social benefits such as (schools, health centres, water tanks, improved houses, better roads, etc.).

People's participation in monitoring and review of the progress of the programme during the programme implementation phase through meetings, visits and reports with reference to planned course of action. (Pre-determined goals, objectives, means of methods, physical and financial targets, time, cost) on the basis of the scientific data collection, analysis and comparison with set criteria. Continuous gathering of information from the participants on objectives, inputs, timely arrival use and cost and activities (timing costs and quality effects, achievement of goals and objectives), outputs, performance, process and analysis of outputs, effects and short term impact thereby helping the agency in identifying problems and constraints, the difficulties and bottlenecks which are thrown up in the implementation phase and allowing feedback for control and adjustments and appropriate conclusions be made for taking corrective action, wherever necessary. Compare the contemplated targets with the benefits or results of programme efforts obtained and other comparable situations. Frequent and periodical measurement and review of achievements and progress of the programme against set objectives.

People's participation in extension evaluation which is a process of determining the extent and the way in which changes in their knowledge, interests, understanding, attitudes and skills which are accomplished; the quality of social services and amentities and the amount of distribution of benefits.

Generate information from the programme participants on the outputs (goal achievement, effects or outcomes), technical, financial and environmental efficiency, equity and the real impact and ameliorating the socio-economic conditions of the participants after the programme is completed or after some time, say three or five years. Feedback for corrective measures to be taken in planning action in future. All these measures would go a long way in making extension an integral part of the education system in universities and colleges.

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Challenge – the precondition of achievement

Dr. Manmohan Singh, the Union Finance Minister, delivered the Convocation Address at the tenth convocation of the Kakatiya University, Warangal. He said, "It turns out that development is not such an easy business as we thought in my younger days. Then we thought that growth was simply a matter of stimulating savings and investing them. After four decades of experience it has become clear that things are far more complicated : that the greatest enemies of growth are disunity and disorder, that the efficiency of investment depends on whether enterprises face or fear competition, that challenge is the precondition of achievement, that hidden environmental costs can mislead us into over-estimating the benefits of growth." Excerpts

Educational institutions not only have a special place in our society but also a special duty towards it. More specifically, our society aspires – must aspire – to higher levels of culture and prosperity, and the impulse in this progress must come from our universities. A society does not civilize itself by accident but by a process of learning, by creative interpretation of experience and by creating new knowledge. Universities are not the only place where this happens, but they are intended, designed and ordained to lead the creative reinterpretation of human experience and to be pace setters in generating new knowledge.

India is a country with an immense development potential. We are fairly well endowed with regard to natural resources. An average Indian is exceedingly hard working. The desire for savings is deeply ingrained even among the poorest people. Our national savings rate exceeding 20 percent of our national income is fairly impressive. We have a vast reservoir of scientific, technical and managerial skills.

Our country has no doubt made significant all round social and economic progress since independence. Yet it is a fact that the overall pace of development has fallen far short of initial expectations and the objective potential of our economy. Nearly thirty percent of our people are still living below an austerely defined poverty line. Universalisation of elementary education is still not achieved. Infant mortality rates are still unacceptably high. Despite a high savings rate, due to inefficient resource use, our economy is not able to generate new employment opportunities on a sufficiently large scale to absorb all the new entrants into the labour force.

For all these reasons, there is an urgent need for an intensive re-examination of our past development stragegies, policies and programmes. We cannot be satisfied with the status quo. We need a policy framework which would reward creativity, efficiency and spirit of enterprise and would also be inspired by an abiding concern or the well-being of the under-privileged, weak and the poor.

Elsewhere in Asia, countries far less well endowed than India have gone far ahead of us in social and economic development. Revolutionary economic changes have been taking place in China for over a decade to make that country an economic super power. Unless India achieves a significant acceleration in the pace of social and economic development, the country will not be able to play a meaningful role in the evolving global economy.

The economic policy changes brought about by our Government under the leadership of Shri P.V. Narasimha Rao are designed to address precisely these very issues. Over a period, they will help to introduce a new element of dynamism to our economy.

However, successful and sustained development is not simply a function of good economic policies, essential though they are. There are several non-economic factors which have a crucial bearing on the evolution of our economy, polity and society. First and foremost is a recapturing of something of the spirit of idealism which inspired our people during the freedom struggle. The nation cannot afford the cost of incompetence and lack of commitment to the nation's well-being; it is going through a period of exceptional risk. If it is to come out of this crisis a stronger and healthier nation, there has to be an all round commitment to the pursuit of excellence as well as social relevance on the part of all major players – government servants, politicians, businessmen and trade union leaders. We must create an environment in which politics will genuinely serve as an instrument of purposeful social change rather than a ticket for power and self-aggrandisement. In any viable development strategy, Government in our country will be called upon to assume major responsibilities in the management of the economy. It is, therefore, of great importance that these responsibilities are well defined and mechanisms are found so that Governments perform their tasks reasonably well. The reform agenda must include a modernisation of the State in the light of vast experience. Similarly, we need businessmen who while earning their profits will not be unmindful of wider social obligations of industry to consumers and society at large. Similarly, we need trade union leaders who, while fighting for the rights of their workers, will not forget the wider social implications of pay increases unrelated to the capacity of the economy to sustain them. We need leaders in various walks of life who are intellectually alert, technically well qualified and committed to social equity. Education has a crucial role to play in promoting the value system conducive to the management of social and economic change.

I am convinced that our country has both capacity and the will power to deal with the formidable economic and social challenges that lie ahead. However, it would be foolish not to take note of some potential dangers. I would stress three : the dangers of disunity, instability and low rate of economic growth.

The foremost need in my view is the need for national unity. It is an unavoidable fact that India is a land of many colours. If the reds do not like the greens, and the greens do not like the yellows, then that is their misfortune, for they can do nothing to remove the others. Hence it is essential that we should all regard diversity as a natural law which we can transgress only at the risk of terrible nervous disorder. Effective solutions have to be found to contain communal and caste tensions which threaten the orderly progress of our economy. For our own collective sanity, we need an outbreak of tolerance.

If tolerance is to thrive again, it is also necessary that people must not misuse regard for diversity to weaken social cohesion and national unity. The ultimate test of political entities is how well they work together. How to organise our country so as to minimise conflict, so as to maximise cooperation; this is not a closed question, we need to think seriously about it. I hope this problem will attract the interest of the political scientists among you.

The second danger in my view is that of instability. Human beings in society have certain simple needs : they want to grow up, live together, bring up families, to better their own record, work with modest sense of fulfilment. Nothing is more inimical to the fulfilment of these simple wants than public disorder. I am not saying that public order must be imposed at any cost, that order is superior to justice. But anyone can see how great is the misery brought by disorder in some parts of our country, and no one can deny the need to set up social and political mechanisms to settle differences and remove injustices peacefully. A firm commitment to resolution of all conflicts through peaceful means is absolutely essential for our survival as a free nation.

The whole justification for democracy is that it is a set of rules designed to settle difference peacefully. Insofar as that peace is disturbed, it is a failure of the democratic system. As a public servant I have observed the functioning of our democratic system for many years. Several weak spots are visible. I sometimes come close to wondering whether adherence to democratic rules has not become a matter of convenience rather than of principle.

This is partly because the stakes have gone up in politics. Governments excercise enormous powers of reward and punishment which can ruin people or make them rich. They have become the centres of contention because too much hangs on their decisions. I think we would see a decline in these conflicts if the Governments did less, and if they did what they did fairly and were seen to be acting fairly. Moderation is the key; our Governments need to govern with a gentle hand.

Equally, India will be a more peaceful place if we deepen our concern for equity. We have to admit that millions of our people are still excluded from a fair chance in life by the accident of birth. If we are the privileged, if we have received the bounty of social advancement, it is all the more important that we should repay our debt to society. I would like the student community particularly to be sensitive to the misfortune of the poor and the weak around us and to make their service a part of their human values. There are many concrete opportunities for this. Ours is a rural country, and the material and cultural deprivation is particularly severe in the villages. Assisting in their development, in the education of the rural people, in equalising their opportunities these are the ways in which young graduates can repay their debt to society.

It is also incumbent upon us to be fair to the future generations. In various ways, the environment is deteriorating so significantly that our children face the prospect of living in a severely degraded world. If this happens, it would be a blot on our civilization. Our self-respect demands that we should leave the world greener and more beautiful than we found it. Effective control of land and water degradation has to figure prominently on the national agenda. I would urge the university communities to care for their surroundings and to assist in local environmental improvement plans.

Finally, the concern with growth. Much attention is given in our country to distribution, and many detailed economic policies are designed to redistribute resources from one set of people to another. This is not unnatural, for the function of politics is to resolve conflicting claims. It is also easy to understand that in a country where they do not see steady gains coming from growth, people concern themselves more with distribution. But economic growth matters; and if there is growth, redistribution will become much easier.

In the last fourteen months, our Government has engaged itself very actively with the stimulation of growth. More accurately, we have made considerable efforts to overcome lack of growth. When we came into power last year, we were faced with a most serious balance of payments crisis. The fiscal system was ridden with unsustainable deficits. As a result, our ability to sustain a right rate of economic growth and to contain inflation was seriously in doubt. The acute shortage of foreign exchange led to a severe import compression which in turn brought about a stagnation in industrial production. The mounting fiscal deficit and import curbs led to a sharp increase in the rate of inflation. We have adopted determined measures to deal with these adversities. Fiscal deficit has been reduced, import compression has been removed, foreign exchange reserves have shown an impressive increase, industrial and trade policies have been revamped so as to promote greater efficiency, cost and quality consciousness, and inflation rate has now declined to a single digit level. Now we feel less constrained and we can concentrate on stimulating growth. But there is no room for complacency. We have a large unfinished agenda for revitalizing the growth processes. We need a broad national consensus to deal with the emerging issues.

It turns out that development is not such an easy business as we thought in my younger days. Then we thought that growth was simply a matter of stimulating savings and investing them. After four decades of experience it has become clear that things are far more complicated; that the greatest enemies of growth are disunity and disorder, that the efficiency of investment depends on whether enterprises face or fear competition, that challenge is the precondition of achievement, that hidden environmental costs can mislead us into over-estimating the benefits of growth. But still our knowledge of the complex processes of social and economic change is insufficient. We are in uncharted waters, and we need a beacon of enlightenment.

AGRICULTURAL SCIENTISTS RECRUITMENT BOARD
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CORRIGENDUM

Reference Item Nos. 2, 13 & 14 of Advertisement No. 2/92 in respect of the posts of Director, National Centre for Agricultural Economics and Policy Research, New Delhi, Veterinary Officer (T- 7), Central Institute for Research on Buffaloes (two posts for Hisar and Sub Campus Nabha, Punjab respectively, and Production Officer (T-6), Indian Council of Agricultural Research Headquarters, New Delhi, which were published in Employment News, etc. on 15.8.92, the following changes may be noted:-

(1) In respect of the post of Director, National Centre for Agricultural Economics and Policy Research, New Delhi appearing at S.No. 2 of advertisement No. 2/92, the Essential qualification No. (v) may now be substituted to read as under in place of the qualifications already published in the advertisements:-

> "Specialisation in quantitative Economics/Econometrics/ Mathematical programming related to Agricultural Economics and experience in quantitative analysis of Agricultural Policies."

(2) In respect of the post of Veterinary Officer (T-7) at Central Institute for Research on Buffaloes, Hisar and CIRB Sub Campus Nabha (Punjab) appearing at S.No. 13 of advertisement No. 2/92 the location and reservation position of these posts may now be substituted to read as under in place of that published in advertisement No. 2/92:-

(i) One post of Veterinary Officer (T-7) is meant for CIRB Sub Campus Nabha (Punjab) which is reserved for S.C. candidates.

(ii) The other post of Veterinary Officer (T-7) which was meant for CIRB main Campus, Hisar, may now be treated for Central Sheep and Wool Research Institute, Avikanagar (Malpura). This post is Unreserved.

(3) In respect of the post of Assistant Production Officer (T-6), Indian Council of Agricultural Research Headquarters, New Delhi appearing at S.No. 14 of Advertisement No. 2/92 the Essential qualifications No. (iii) may now be read as under in place of the qualification already published in the advertisement:-

> "Diploma in Printing Technology or 2 years' postgraduate Diploma in Book Publishing with specialisation in Book Production."

The nomenclature of the post may be read as Assistant Production Officer (Publication).

Other contents of the advertisement remain unchanged.

The last date for receipt of applications in ASRB in respect of the above posts is extended upto **7.12.92.** Those, who have already applied in response to ASRB's advertisement No. 2/92, need not apply again.

SUKH PAL
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Need to Popularise Scientific Knowledge

'India has made significant strides in the field of science and technology as a result of excellent research work done in some of the national laboratories and other centres of higher learning, but most people in the country including the educated sections, are not fully aware of the progress achieved in this field,' said Dr. K. Jayashankar, Vice-Chancellor of the Kakatiya University. He was speaking at a function got up by the Warangal Regional Centre of Andhra Pradesh Academi of Sciences at Kakatiya University to mark the inauguration of the activities of Regional Centre for the year 1992-93.

Referring to the research findings published in professional and scientific journals, Dr. Jayashankar said that because of the technical jargaon used in those articles, they were not comprehensible to general readers, sometimes even to the specialists in the field concerned. He therefore felt that there was a need to transform research papers into popular articles for the benefit of general readers. He also felt that video and audio cassettes could be used as powerful instruments for popularising scientific knowledge.

Dr. Jayashankar complimented Prof. D. Balasubramanian, Director of the Centre for Cellular and Molecular Biology (CCMB) for his sustained efforts in popularising scientific knowledge through popular articles and also through electronic media on a variety of themes in the field of science and technology.

Prof. Balasubramanian, who made a mark at the international level with his research, delivered a popular lecture on 'The Biology of Cataract Formation,' the first one in the series organised by the Warangal Regional Centre. He opined that cataract formation was not a disease, but was only an inescapable inconvenience associated with the problem of ageing. He observed that there was no cure to it, but the process of cataract formation could be avoided or delayed at least for some years by regulating food habits, avoiding smoking, minimising direct exposure to sunlight. It was a lecture-cum-slide show.

Prof. G. Sivarama Sastry, Honorary Secretary of A.P. Akademi of Sciences, who presided, said that besides popularising scientific knowledge, the Akademi of Sciences was trying to create awareness of new technology among the masses.

Prof. Dinker Sirdeshmukh, President of the Warangal Regional Centre of A.P. Akademi of Sciences and Dean, College Development Council of the university, said that the Centre would organise lectures on Remote Sensing, Wild Life and Ecology, New Techniques in Medical Diagnostics, Birds of Andhra Pradesh and Astronomy.

Forestry Research Project for Dr. Arya

The Overseas Development Administration (ODA) under the Forestry Research Programme, University of Oxford, U.K., has sanctioned a Research Project of about Rs. 25 lacs to Dr. S. Arya, Vice-Chancellor, Kurukshetra University, Kurukshetra for carrying out collaborative research with the Henry Doubleday Research Association of U.K. on 'On-Farm Trials, demonstrations and extension work with multipurpose trees in arid and semi-arid areas of North-West India'.

The Project will concentrate on improvement in the quality and quantity in genetic material on certain arid zone trees like *Prosopis cineraria, Tecomella undulata* and *Acacia tortilis* – the fodder and food yielding trees of the '*thar*' desert of Rajasthan. On-farm demonstration plots during the project will allow farmers to see the performance and management of selected germplasm of above mentioned trees. The women of the '*thar*' desert in particular will benefit from employment in tree nurseries and will be the direct beneficiaries of improved fuelwood production systems in agroforestry and in the associated improved fuelwood supply.

Training Programme in Information Science

The National Institute of Small Industry Extension Training (NISIET) proposes to organise a two week training programme on Information Storage and Retrieval Systems from January 18-29,1993. The programme offers training in library and information science, with emphasis on modern methods of information handling and computerisation.

The objective of the programme is to expose participants to modern methods of information storage and retrieval. The course contents include : Introduction to information science, Information sources, Information systems and services, Information processing and retrieval, Information transfer and dissemination, Information technology and computer applications, Management of information systems and services, and Industrial information.

The programme is intended for persons working in information centres, documentation centres, libraries, academic and research institutions, industrial development organisations, public and private sector organisations responsible for information handling.

Further details may be obtained from Mr. B. Sambi Reddy, Programme Director, NISIET, Yousufguda, Hyderabad-500045.

Privatisation of Education

'Privatisation of education is not a new phenomenon, but what is new about it is the pronounced drift towards commercialisation especially in the wake of new economic policy of liberalisation,' said Dr. K. Jayashankar, Vice-Chancellor of the Kakatiya University while delivering the inaugural address at the symposium on Privatisation of Education organised jointly by the Department of Public Administration of Kakatiya University and the Warangal branch of Indian Institute of Public Administration recently.

Underlining the importance of the role of the state in the Indian situation in expanding educational facilities Dr. Jayashankar observed that private effort could at best supplement the state effort but cannot substitute it.

Dr. Jayashankar referred to the factors that had hastened the process of privatisation of education in the recent past and said that the loss of people's confidence in the educational institutions managed by government, especially at the school level, was also a major factor which enabled the private sector to flourish.

Prof. G. Haragopal of the University of Hyderabad, maintained that privatisation of education had resulted not only in commercialisation but also there was a danger of its degeneration to vulgarisation because of what he termed as 'quick money culture' that pervaded the society.

Prof. V. Shivling Prasad of Dr. B.R. Ambedkar Open University felt that privatisation of education was taking place for a variety of reasons and categorised them as privatisation for service, privatisation for living, privatisation for profits and privatisation for legitimisation. It was difficult to check the process of privatisation of education because of government's inability to mobilise necessary funds for the purpose, he said.

Capt. V. Laxmikantha Rao, Secretary of Ekasila Educational Society said that per capita expenditure in private engineering colleges was far less than the one incurred in Government engineering colleges and IITs. He felt that there was no justification in accusing the managements of private colleges of making profits.

Dr. G. Ramesh, Head, Department of Education at Kakatiya University said that if any individual or organisation came forward to start educational institutions accepting all social obligations, the government should not come in the way of their effort to do so and added that there should be an effective mechanism to control the quality of education in the private sector.

Prof. Y.V.N. Rao, Principal of Kakatiya Institute of Technology & Science (KITS), a college under private management, complained of excessive regulatory control of the Government over private engineering colleges. This kind of control, he said, was dampening the innovative spirit of private institutions.

Several students and teachers, who attended the symposium, also expressed their views. The consensus which emerged during the course of their discussion was by and large against privatisation of education.

Conference on Health and Disease

The Fourth International Conference on the Health and Disease : Effects of Essential and Toxic Trace Elements will be held at the Jamia Hamdard, New Delhi on February 8-12, 1993.

The scope of the conference is related to the clinical, biochemical, immunological, nutritional and toxicological aspects of trace elements with major emphasis on zinc, copper, iron, selenium, chromium lead, mercury, aluminium and cadmium. The meeting will also deal with the other micronutrients and their interactions. A special session will deal with the molecular mechanisms of metal toxicity and carcinogenesis. Another session will deal with the health effects of traditional medicine containing a number of essential and toxic trace elements.

The topics proposed to be discussed at the conference include (1) New techniques for the assessment of trace elements; (2) Free radicals and trace elements; (3) Ageing and trace element; (4) Nutritional problems and epidemiology (pregnancy and lactation requirements, interactions between major and minor nutrients); (5) Diagnosis of marginal deficiency and toxicity of trace elements; (6) Trace elements and diseases (cardiovascular, inflammatory conditions, diabetes, infections and liver disorders); and (7) Immunology, cancer and trace elements.

Further details may be obtained from the Secretariat, 4th ICHD, Dept. of Med. Elementol. & Toxicol., Jamia Hamdard, Hamdard Nagar, New Delhi-110062.

Knowledge Organisation and Expert System

Eminent Librarian and noted Library Science teacher, Prof P.N. Kaula has joined Universidad Autonoma de Madrid, Madrid for three months on an invitation of the Ministry of Education and Science of the Govt of Spain. He will assist the Universidad in the project 'Knowledge Organisation and Expert System'.

D. Litt. in Library Science

The first D. Litt. degree in Library Science in India has been awarded to Dr Banabihari Shukla, by Utkal University, Bhubaneshwar. Dr Shukla had worked on the subject, 'The work and Imapct of a Pioneer in Library and Information Science; A critical study of the works of Prof Prithvi Nath Kaula.

News from Agricultural Universities

Perspective Planning for Indian Agriculture

Management of land and water resources, crop improvement, livestock development, post harvest technology infrastructure development and environmental protection should be the broad areas of attention for perspective planning for Indian agriculture in the next century, observed Dr. Khem Singh Gill, Vice-Chancellor, Punjab Agricultural University. He was delivering a lecture on "Indian Agriculture – Instrospection and perspective planning" in Ludhiana recently.

In the context of food sufficiency, Dr. Gill said that agricultural sustainability sought to maximise food production within constraints of profitability. The essence of sustainability was the maintenance of productivity of natural resources. Efforts must be made to promote optimum use of land and water, he added.

The Vice-Chancellor noted that by the turn of the century India would have a population of about 1 billion. To meet the increasing demand for agricultural commodities, increased growth rate, regional equity and sustainable productivity must be emphasised.

Regarding crop improvement, he stressed on development of hybrids in different crops, drought and salt stress tolerant genotypes, incorporation of disease and insect pest tolerance, use of bio-technological techniques and provision of certified seeds. Dr. Gill said that for improved production technology Indian agriculture must go in for demarcation of efficient and inefficient crop zones, region-specific technology for hybrids, developing low-cost technology for small and medium farms, diversification of farming systems, proper weed management and integrated pest management.

Dr. Gill also pleaded for encouraging agroforestry system and conversion of degraded soil under forests. In the field of livestock development, he focused on genetic improvement in cattle and poultry. To improve value and productivity in agriculture provision of proper processing and packing of the farm products was also highlighted.

College of Agril. Engg. Convocation

"The economic scenario in India is undergoing radical changes calling upon the country to be self sufficient and self-reliant in the new world order. The era of subsidies and protectionism is fading out fast, yielding way to an era of cut-throat competition and professionalism", observed Dr. T.P. Ojha, Deputy Director General (Engineering), ICAR, New Delhi. He was delivering the convocation address at the College of Agricultural Engineering at Punjab Agricultural University recently.

Appreciating the role of PAU, Dr. Ojha emphasized that the existing technologies, the yield production potential of crops was close to stabilization and the farmer could add to his profits only by adopting 'value adding' modern post-harvest technologies. He suggested establishment of integrated agro-business complexes for edible oils, fruits & vegetable products and various animal products, etc. He called upon the young agricultural engineers to adopt and stress on the scientific concepts like minimum tillage, drip and sprinkler irrigation, integrated pest management controls, minimising harvest and post-harvest losses and effective overall management.

Dr. Ojha said that the time gap between generation of research results and their adoption by the farmers was greatly reduced and the farmers had confidence in the recommendations of agricultural universities. He asked the students to continue the process of self-education through professional journals to face the educated progressive farmers boldly.

In his presidential remarks Dr. Khem Singh Gill, Vice-Chancellor said that two new M.Tech programmes in Agro-Industrial processing and sugar engineering and Ph.D in agro-industrial processing were started from the academic year 1991-92. Dr. Gill disclosed that a new scheme 'Earn while you learn' for the students of B.Tech had been submitted to ICAR for funding during 8th Plan.

The Vice-Chancellor stated that the university was paying more attention to develop machinery for oil seeds, sugarcane and horticulture crops. He hoped that newly developed farm machines by PAU like strip-till drill, sugarcane harvester, paddy transplanter, etc. would be adopted by farmers in a big way.

Dr. S.D. Khepar, Dean, College of Agricultural Engineering highlighted the achievements of the College. He disclosed that new subjects like energy management, post harvest technologies, on-farm water management, computer training, etc. had been added to the curriculum.

A total of 114 students were awarded degrees of B.Tech for the academic years 1989-90, 1990-91 and 1991-92. A gold medal, six merit certificates and special prizes were also awarded for outstanding achievements in various fields and sports.

Emancipation of Farm Women

"In spite of the global concern for the emancipation of women in general and farm women in particular, satisfactory efforts for improving the working environment and thereby raising their standard of living have not been made", observed Dr. A.L. Chaudhry, Vice-Chancellor, Chaudhary Charan Singh Haryana Agricultural University. He was speaking after inaugurating the annual meeting of All India Coordinated Research Projects at the College of Home Science of the University held in Hisar recently. He said that women scientists had a pivotal role to perform in meeting varied contemporary challenges in improving the quality of life of rural women and family. The women scientists could act as missionaries for transferring the knowledge generated in the laboratories to the door step of the farm houses, he added.

Dr. A. Ahmad, Deputy Director General(Edn), Indian Council of Agricultural Research, who presided, disclosed that several new programmes pertaining to the betterment of women and child had been introduced in collaboration with traditional mutual help associations. He hoped that all required assistance and guidance for self-employment of the poor women would be provided by these programmes.

Over 100 delegates took part in this programme and reviewed the research achievements obtained under All India Coordinated Research Projects (AICRP) so far.

Fodder Production Workshop

A 2-day State Level Rabi Fodder Production Workshop was recently organised at the Punjab Agricultural University. Inaugurating the workshop Shri Harbans Singh Sidhu, Minister for Animal Husbandry, Punjab felt that there was need to make special efforts to increase the fodder production in the State. So far much work had not been done in this regard. He said that the concerned official should visit each and every village in the State to give information to the farmers regarding new techniques of fodder production.

Mr. Sidhu said that sub-standard seeds of fodder were sown in poor lands which was a major cause for low production of fodder to meet the needs of the State. At present only 15 kg fodder was available per cattle daily which was much low as per requirements. Thus we would have to increase the fodder production if we wanted to get more milk yield from the cross bred cattle, he said. While appreciating the efforts of the Punjab Agricultural University, he suggested that more efforts should be made to make available the new technology to the farmers. The Minister appreciated the work done by the Communication Centre of the PAU for immediate transfer of technology.

Dr. Khem Singh Gill, Vice-Chancellor, who presided, said that the fodder production could be increased considerably on the basis of research work done by the PAU. He said that at present only 10 percent area was under fodder cultivation and there was no possibility of its increase. Therefore, he suggested that the shortage of fodder could be met by increasing per acre fodder yield. While dicusssing problems of the seed, he said that the University had worked out a special programme for the production of high-yielding seeds. He sought the cooperation of the State Department of Animal Husbandry to overcome this shortage.

News from UGC

Countrywide Classroom Programme

Between 1st December to 7th December, 1992 the following schedule of telecast on higher education through INSAT-1D under the auspices of the University Grants Commisstion will be observed. The programme is presented in two sets of one hour duration each every day from 1.00 p.m. to 2.00 p.m. and 4.00 p.m. to 5.00 p.m. The programme is available on the TV Network throughout the country.

Ist Transmission

1.00 p.m. to 2:00 p.m.

1.12.92

"Molecules and Models"

"Amniocentesis – II

"AIDS, The Virus"

2.12.92

"Electrical Power"

"Getting Ready for Magnification – I"

"Pigments and Dyes"

3.12.92

"Buried Treasure : Boron – Light Heavy Weight"

"The New Narrative of Latin America – I"

4.12.92

"Geometry Made Simple"

"Women in Development : Malshiras – A case Study"

"Footnotes"

5.12.92

"Theatre in Society – I"

"The Mughal Miniatures – I"

Week Ahead

6.12.92

No Telecast

7.12.92

"What Causes Magnetism'

"Humming Honey Maker'

"Evolution of Money"

IInd Transmission

4.00 p.m. to 5.00 p.m.

1.12.92

"Fluoride Hazards of Potable Water"

"Recanalisation Microsurgery"

"Gottingen – Currents of the World"

2.12.92

"Structure of Matter – How do Things Break?"

"Fruit Bats of India – An Introduction"

"Natural Gas in Industry"

3.12.92

"Coal – III: Earth on Fire"

"Masterpieces in World Literature: Ramayana and the Paradise Lost as REpresentative Epics"

"Borrowings in English : The French Connection – I"

4.12.92

"Understanding Visual Language"

"Ariane, Direct Flight to Space"

"Mental Illness – Reaching the Unreached – I"

5.12.92

"Nrityaganga – III"

"Inside the Smithsonian : The Information Age – A Videowall Experience"

Week Ahead

6.12.92

No Telecast

7.12.92

"Light from Atoms"

"Chilli"

"Indian Agriculture – A Scenario for the Future"

News from Abroad

Science & Technology in the Islamic World

The University of Tehran, in collaboration with the Academy of Sciences of the Islamic Republic of Iran and the Third World Academy of Sciences, proposes to organise the International Congress for Advancement of Science and Technology in the Islamic World on May 17-19, 1993 at Tehran.

The Congress aims to deal with the following subjects:

– Verifying and assessing the stand point of science & technology in the third world communities specially in the Islamic nations, and discussing the importance and effects of the scientific approach and scientific achievements in the promotion of economic, social, cultural, and artistic status and condition of the progressing countries.

– Studying fundamental and basic phenomena which resulted in the scientific prosperity of Islam in the first Hejira centuries, and investigating the causes of scientific and industrial failures in the third world countries during the recent centuries so as to learn from the historic examples and events.

– Studying the possibilities for quick access to modern scientific technology with emphasis on reducing the degree of dependence on the powerful industrial countries.

– Providing facilities for the scholars of different groups in the Islamic World to meet, exchange views and become familiar with each other and discuss matters of common interest.

The Main subjects for discussion at the conference include (1) Trend of the historic scientific reforms in the Islamic communities and the works of great Muslim scholars in various fields of the human knowledge; (2) Future perspectives in science & technology in Islamic World and necessity of investment in the field; (3) Consideration of science & technology in their broad dimensions, with emphasis on their importance in promoting the living conditions of the third world nations; (4) The interrelation of science & technology with the political, economical, cultural, artistic and living conditions; (5) Qualitative and quantitative education and training of manpower in the domain of science & technology, and providing suitable conditions for activity of specialist manpower; (6) Problems and difficulties for research in the field of science & technology; (7) Promoting basic and applied research and studying their relative scopes in the Islamic World; (8) Transmission of science, technology, art and its compatibility with living conditions, and culture of Islamic countries; (9) Study on the factors which have led to the promotion of the third world countries towards high Tech., and advancement with particular emphasis on national policy in this field; and (10) Establishing cooperation among the Islamic nations, with emphasis upon promoting their scientific and technological conditions.

Further details with regard to participation, etc. may be had from the Secretariat of the Congress for the Advancement of Science and Technology in the Islamic World, P.O. Box No. 14155-6619, Tehran - Iran.

Book Review

An Objective Assessment

P. B. Mangla*

Girja Kumar. S.R. Ranganathan : An Intellectual Biography. New Delhi, Har-Anand, 1992. Rs. 295/-

Dr. S.R. Ranganathan (1892-1992) whose birth centenary is being celebrated this year can rightly be called a 'Prince' among world's library & information scientists. His Brahaminic background combined with scholarly ethos rooted in the Tamil traditions provided him the necessary setting to grow as a great intellectual, thinker and leader in the field he finally chose to pursue. In this country it is mainly because of his original contributions and stewardship that library profession rose from a rather neglected status to high academic and socially recongnised level. He is therefore rightly called as Father of Library Movement and Library Science in this country. Also, it is because of his seminal writings that India continues to occupy a place of prominence on the world library map. Several biographical accounts of this great man have already been published, including his autobiography entitled *A Librarian Looks Back* (ABC Publishing House 1992, 485 p.). The present one by Girja Kumar is certainly a welcome addition. Girja Kumar was Ranganathan's student in the University of Delhi during the late 1940's. In spite of his being a great admirer of his teacher, often leaning to be a loyal *chela* of his *guru*, he is largely successful in making an objective assessment of Ranganathan as a thinker, teacher, professional colleague and a social being.

Ranganathan was born in 1892 in a Brahamin family of Shiyali, a small village in the Thanjavur district of Tamil Nadu. After completing his university education in 1917 he taught Mathematics for about six years (1917-23) as a college lecturer, first at Mangalore and Coimbatore and then as Assistant Professor at Presidency College, Madras. He joined as librarian of the Madras University in 1924 and soon after joining there spent about a year in studying librarianship at the University College, London and in visiting several libraries in that country. Among his teachers there a special mention need be made of W.C. Berwick Sayers who not only provided him a great mental stimulus but also was his friend and mentor during his future work in the field. For about five decades i.e. almost till his death in 1972 Ranganathan remained actively involved in professional work and published more than 60 original books and around 3000 research papers on almost all facets of Library Science and Service. Some of his books which can certainly be called classics in the field are: *Five Laws of Library Science* (Ist ed. 1937 ; 2nd ed. 1957), *Prolegomena to Library Classification* (Ist ed. 1937; 2nd ed. 1957; 3rd ed. 1967) and *Library Administration* (Ist ed. 1935; 2nd ed. 1958). His *Colon Classification* (Ist ed. 1933; 7th ed. 1989) and *Classified Catalogue Code* (Ist ed. 1934; 5th ed. 1964) were harbingers of a new era in the field of library classification and cataloguing respectively, and would continue providing a great intellectual stimulus to future generations of classifiers and cataloguers around the world. He worked as Librarian, Madras University till 1944; Banaras Hindu University during 1945-47 and then on the invitation of the then Vice-Chancellor Sir Maurice Gwyer joined the University of Delhi in 1947 as and Honorary Professor, and worked there upto 1955. After spending a few years at Zurich with his son Ranganathan finally settled down at Bangalore where with the support of Professor P.C. Mahalanobis he established the Documentation Research and Training Centre (DRTC) in 1962 under the overall auspices of the Indian Statistical Institute, Calcutta. DRTC functioned as a renowned centre of research and training under his stewardship and he continued working there actively till his death in 1972. In the rather long list of his achievements and honours bestowed upon him a few which may be highlighted here are : conferment of the degrees of D.Litt. (*Honoris Causa*) by the University of Delhi in 1947, and the University of Pittsburg, (USA) in 1964; Padamshri in 1957; and appointment as National Research Professor in Library Science by the Government of India in 1965. The last one was certainly a matter of great honour for him as well as the library profession because he was one of the few eminent academics who were appointed as National Professors in this country. Among the few others who were appointed as National Research Professors mention may be made of a galaxy of scholars such as Sir C.V. Raman (Physics), Suniti Kumar Chatterjee (Linguistics), Dr. D.N. Wadia (Geology), Dr. S.M.A. Ali (Orinthology) and Dr. V.K.R.V. Rao (Economics). Also, he was given high awards by several organisations outside India such as the American Library Association, International Federation for Documentation (FID) and the Library Association, London. A postal stamp in his honour was released by the Government of India in August 1992.

Girja Kumar has arranged this book in two Parts: Part I starts with the chapter entitle Social Milieu in which Ranganathan grew and in the following nine chapters describes his life and contributions. His other interests in areas such as religion, occultism and Indian scriptures (viz. *Ramanayana* and *Gita*) are explained in a readable and probing manner. His personal traits and professional relationships with others have been depicted with a great insight wherein certain characteristics of his personality such as intellectual arrogance, intolerance

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* *Professor, Department of Library & Information Science, University of Delhi, Delhi-110007; and Special Adviser, IFLA Regional Section for Asia and Oceania.*

in general towards others including his seniors as well as junior colleagues and high level of dominating nature stand out quite prominently. In part II the author makes an assessment of Ranganathan's contributions and evaluates his ideas and concepts such as fundamental laws and canons, application of scientific method so as to consider Library Science as a 'Science', (certainly a social science), faceted classification, postulational approach and mnemonics which in several ways have their uniqueness and originality. These ideas and concepts certainly place him as a doyen amongst other twelve greats of their times such as Anthony Panizzi, Melvil Dewey, C.A. Cutter, Henry Bliss and W.C. Berwick Sayers. Though Ranganathan himself has also often given details about his life and works in several of his publications including his autobiography yet to Girja Kumar goes the credit for not only putting all the facts and details at one place but also giving this interpretations and evaluation with a good amount of objectivity and insight.

On the rather negative side of this description one unfortunately finds that Girja Kumar tends to portray Ranganathan as a highly 'tortured' person, a person who was throughout his career unnecessarily maligned by his seniors and others with whom he came in contact either in his official or professional capacity. Among the several factors responsible for this the one to which Girja Kumar gives rather too much weight is the Brahaminic birth of Ranganathan in an environment wherein anti-Brahaminism has been the rule of the day. While this way of reasoning for his troubles may be accepted to some extent yet there were several traits of his own personality which also greatly contributed in creating several unsavoury situations for him. While he did have to face detractions for whatever reasons, on several occasions during his career, (and that perhaps has always been the case of almost all great men) yet he was fortunate enough to have been amply compensated by the love, affection, admiration and loyalty he spontaneously received from a large band of his students, professional friends and others, in India as well as all over the world. In a way it would be quite correct to say that he was among the very few great men who really enjoyed great honour and respect during his life time itself.

Undoubtedly Ranganathan was a teacher *par excellence*. He had really an inimitable style of teaching. He would generally provoke his students to think and develop self confidence so as to explore newer intellectual horizons independently. As a student myself of this great teacher in the University of Delhi I must confess that during the past almost 35 years or so that I have been in this profession, I have come across only few others who could possibly be compared with him, either in India or abroad. To highlight the high reputation that he carried all over the world I may add from my own experience that when I went to join Columbia University, New York in 1961 for higher studies, I was met by Professor Maurice Tauber who was then holding the most prestigious Melvil Dewey Chair at Columbia University. After the usual greetings his first remark was: 'I learn that you were a student of Dr. Ranganathan and therefore I don't think we would be contributing anything very new to your knowledge of the subject. During your stay here you would however be able to see much of library service in action in this country.'

In his last chapter Girja Kumar discusses the relevance of Ranganathan's ideas and contributions in the present-day ever- changing world. It is indeed certain that Ranganathan would be remembered for his seminal contributions for years to come. His writings provide library and information science professionals a conceptual framework for research on new ideas and concepts. He was always for modernization wherein the present-day use of computers, CD-ROM and other gadgets of information technology can greatly facilitate the storage, processing and dissemination of information more effectively, efficiently and speedily. Concepts such as resource-sharing and networking were of great interest to Ranganathan which can now be implemented with comparative ease because of the fast development in areas such as telecommunications, AV aids and xerography. In this country the present programmes such as INFLIBNET, which is being initiated by the UGC, and other local area networks such as DELNET, CALIBNET are great developments which Ranganathan used to discuss, plan and even dream about. Unfortunately, however, his *Colon Classification* and *Classified Catalogue Code* are fastly losing their relevance. Among the several reasons for this rather sad development is the fact that there is no organisational support to keep them alive and uptodate. He established DRTC as a research centre with high hopes in this direction but unfortunately his dream remains unfulfilled. If *Dewey Decimal Classification* (DDC) can be kept alive by the Library of Congress (Washington, D.C.) and *Universal Decimal Classification* by the FID (The Hague) certainly the establishment of a National Research Centre in Library & Information Science by the Government of India would help not only to promote further research and study on this rich legacy of Ranganathan but also on various other facets of library and information science and service in this country.

Girja Kumar's book is comprehensive, well documented and readable but at places is quite repetitive. The author seems to be too much fond of certain expressions such as 'dialectical', 'Bharaminic background' and several others and generally repeats them without any particular context or even relevance. Also, to compare Ranganathan with a 'banyan tree under whom nothing seemed to grow (p. 58)' is quite wrong and unjustified simply because the crop of professionals which grew under his care was not only large but also qualitatively of a high calibre.

The book otherwise has been published in a good format and is well printed. A reasonably priced paperback edition could possibly help in promoting its sale among individual buyers.

THESES OF THE MONTH

A list of doctoral theses accepted by Indian Universities

HUMANITIES

Philosophy

1. Gabriel, M. **Subjectivity and religious truth in the philosophy of Soren Kierkegard.** Madras.

2. Girish Kumar, T S. **Marxian concept of ideology: A critique of Antonio Gramsci and Louis Althusser.** NEHU. Dr N Malla, Prof, Department of Philsophy, North Eastern Hill University, Shillong.

3. Lyngdoh, Morning. **The concept of virtue in the Khasi worldview.** NEHU. Dr (Mrs) Sujata Miri, Prof, Department of Philosophy, North Eastern Hill University, Shillong.

4. Nimanong, Phramaha Veerachart. **A study of Theravada Buddhist concepts of man, khandha and karma, kamma.** Madras.

5. Vanlalmawia, K. **Laldenga, Zoramthanga and the concept of freedom.** NEHU. Dr (Mrs) S Miri, Prof, Department of Philosophy, North Eastern Hill University, Shillong.

Religion

1. Qasmi, M Saud Alam. **A critical study of Quranic thought of Shah Walliullah Delhavi. AMU. Prof A Aleem Khan.**

Fire Arts

Drawing & Painting

1. Sharma, Alpana. **Garhwal mein chitrakala ke dharmik ayam. Garhwal.** Shri Ranbir Saxena, D A V College, Dheradun.

Language & Literature

English

1. Ajay Kumar. **Virginia Woolf as an essayist.** Magadh.

2. Daniel, Geogre K. **John Updike's art of fiction.** HS Gour. Dr C Sengupta, Department of English, Dr Hari Singh Gour Vishwavidyalaya, Sagar.

3. Indira, Sajja. **Image and theme in Anita Desai's novels.** Andhra.

4. Joseph, Mathew P. **A critical study of symbols in the poetry of Percy Bysshe Shelley.** Durgawati. Dr S B Shrivastava, Prof, Department of English, Rani Durgawati Vishwavidyalaya, Jabalpur.

5. Padma, V. **Towards curricular alternatives to the teaching and learning of English literature: Tertiary level, University of Madras.** Madras.

6. Sarkar, Seema. **F Scott Fitzgerald: The man and his novels.** Awadhesh. Dr N C Mishra, Prof, Department of English, Govt College Gurh, Rewa.

7. Venkata Gopinath, Bh. **Quest for Harmony: A study of Harold Pinter and Edward Bond.** Osmania.

Sanskrit

1. Mishra, Deobhadr. **Koorma Puran ka sanskritik adhyayan.** Awadhesh. Prof K P Mishra, Prof (Retd), Sanskrit Nargsinghpurva, Chhatarpur.

2. Ramankutty, P V. **Curse as a motif in the Mahabharata.** Calicut. Dr K N Narayanan Elayath, Department of Sanskrit, University of Calicut, Calicut.

3. Sharma, Roop Lal. **Naishkarmiya Siddhi ka sameekshatmak adhyayan.** HP.

4. Sharma Bhardwaj, Shriom. **Sidhanta Manjusha sameeksha.** AMU. Prof C T Kenghe, Department of Sanskrit, Aligarh Muslim University, Aligarh.

5. Suneetha, K. **Minor rupaks of Ramapanivada: A critical study.** Calicut. Dr T K Narayanan, Department of Sanskrit, University of Calicut, Calicut.

6. Tiwari, Bal Govind. **Shaktayan Vyakaran ka samalochnatmak adhyayan.** Durgawati. Dr S P Tripathi, Reader, Department of Sanskrit, Rani Durgawati Vishwavidyalaya, Jabalpur.

Punjabi

1. Gurpreet Singh. **Hanuman Natak: Editing and textual study.** Panjab.

Hindi

1. Ajmera, Suryakanta. **Sur sahitya mein natya tatva.** SNDT. Dr (Shri) K D Bhingarkar.

2. Athar Bano. **Krishna kavya kee parampara mein kanhavat.** AMU. Prof Nazir Mohd, Department of Hindi, Aligarh Muslim University, Aligarh.

3. Bajpayi, Dolly. **Shrikant Verma ke kavya mein samajik chetna aur shilpa.** Awadhesh. Prof (Smt) Vinod Tiwari, Department of Hindi, Govt Girls College, Rewa.

4. Chutail, Premlata. **Nirmal Verma kee astitvavadi chetna.** Vikram. Dr Shukuntla Singh, Prof, Department of Hindi, Makhanlal Chaturvedi Govt Girls College, Khandwa.

5. Juneja, Ashok Kumar. **Arya Samaj ka Hindi jeewani-sahitya ko yogdan.** Panjab.

6. Mathpal, Basanti. **Vishnu Prabhakar aur unka natya sahitya.** Garhwal. Dr Punjabi Lal Sharma, Department of Hindi, D A V College, Dheradun.

7. Negi, Jogindera Singh. **Kabir evam Tulsi ke kavya shilpa ka tulnatmak adhyayan.** HP.

8. Nirmala, G. **Hindi aur Telugu ke Ramkavyon mein istri patra.** Osmania.

9. Rawat, Yojna. **Shrilal Shukla ke upanyas sahitya ka samajshastriya adhyayan.** Panjab.

10. Sharma, Veena. **Bhairav Prasad Gupta ke upanyason mein samajik-rajnitik chetna.** HP.

11. Tomar, Saroj. **Marxvadi mandand aur Hindi ka pragativadi kavya, 1960 se 1980.** Vikram. Dr O P Aran, Prof, Department of Hindi, Govt Arts and Commerce College, Ratlam.

Urdu

1. Hasan Subhani. **Development of Urdu translation from 1864 to 1910.** AMU. Dr Nadir Ali Khan Sulaiman.

2. Khan, Malik Mohd Ismail. **Contribution of Josh to Urdu poetry.** AMU. Prof Qazi Abdul Sattar, Head, Department of Urdu, Aligarh Muslim University, Aligarh.

3. Khan, Shairullah. **Unniswin sadi mein Urdu resail: Ek tajziati motalea.** Magadh.

4. Quazi Samiullah. **Quatil Shafai: Life and work.** Magadh.

Bengali

1. Datta, Alibha. **Aspectual categorization of Bengali verbs.** Calcutta.

Oriya

1. Sahu, Ramakanta. **A psycholinguistic study of reading miscues of Oriya-English bilinguals.** Osmania.

Gujarati

1. Joshi, A D. **Sudama charitra in mediaeval Gujarati poetry.** Saurashtra. Dr B S Jani, Reader, Department of Gujarati, Saurashtra University, Rajkot.

Manipuri

1. Singh, Laishram Kaminikumar. **Manipuri shahityada longi yaol.** Manipur. Prof Ch Manihar Singh, Department of Manipuri, Manipur University, Imphal.

2. Singh, Moirangthem Rajendra. **Meitei, Moirang, Kakching, Andro-Makhoigi Hourakpa Amasung lai haraoba neinaba amasung changdamnaba.** Manipur. Prof Ch Manihar Singh, Department of Manipuri, Manipur University, Imphal.

Persian

1. Rizwani, Ayesha. **A critical edition of Diwan-I-Ruhul Amin.** Calcutta.

Arabic

1. Faizan Ahmad. **Contribution of Rasheed Raza to Arabic literature: A critical study.** AMU. Dr Mohd Rashid, Prof and Head, Department of Arabic, Aligarh Muslim University, Aligarh.

2. Khalil Ahmad. **Contribution of Kurd Ali to Arabic literature.** AMU. Prof Mohd Rashid, Prof and Head, Department of Arabic, Aligarh Muslim University, Aligarh.

3. Towqueer Alam. **The Holy Quran and the orientalists literary perspective.** AMU. Prof Abdul Bari, Reader, Department of Arabic, Aligarh Muslim University, Aligarh.

Tamil

1. Arunamuruval, Na. **Prof K Kailasapathy's contribution to** Tamilology. Madras.

2. Jayachandra Babu, M S. **Yesuvin kaviam - oru aaivu.** Madras.

3. Kumuthavalli, R. **Thamizh elakhiathil Pithargalin pangu.** Madras.

4. Pushparaj, S. **A Madhaviahvin thamizh novelgal - oru aazhnilai paarvai.** Madras.

5. Ramu, A. **Thamizhill varalatru nadagangal - oru aaivu.** Madras.

6. Vathsala, M. **Pengal padaippil pengal vazhviyal, 1975 mudal 1985 varailana thamizh navalgal.** Madras.

Kannada

1. Vijayashree, K. **Kannada navya kadambarigalu.** Bangalore. Dr K Marulasiddappa, Chairman, Centre for Kannada Studies, Bangalore University, Bangalore.

Telugu

1. Kurmaiah, Chilukoti. **Sri Pulikanti Krishna Reddy kathalalo** samajamu: Bhasha, A D 1961-89. Andhra.

2. Satyanarayana, K. **Puranalu lokalokanam.** Telugu.

3. Srinivasa Rao, Pulakhandam. **Harikatha vikasamu: Uttarandhramu.** Berhampur. Dr P Veerasalingam, Reader, Department of Telugu, Vikramdev College, Jeypore.

Geography

1. Chinna Omkari, A. **Irrigation development and cropping pattern in Nalgonda District of Andhra Pradesh.** Osmania.

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3. Roddanavar, Veeranna Chanarasappa. **Agricultural geography of Dharwad District.** Karnatak. Dr S S Naregal, Reader, Department of Geography, Karnatak University, Dharwad.

4. Surendra Singh. **Towns of Garhwal Himalaya: A geographical interpretation.** Garhwal. Dr Nitya Nand, Department of Geography, DB S College, Dehradun.

History

1. Anbalagan, A. **Agrarian unrest in Tamil Nadu with special** reference to North Arcot District, 1936 to 1982. Madras.

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Editor :
SUTINDER SINGH

Human Relations in Indian Universities

S. Rastogi*
K.G. Kantharia*

Education has been assigned as an industry for human resource development for different walks of life. The difference in a 'university' and an 'industry' is that the 'university' produces human beings who are different from one another in all respects and are shaped to accept various challenges in different fields, while 'industry' produces goods being identical in shape and quality and are not living beings. But, both the university and the industry have one thing in common i.e. management of workers who work hard day after day for raising the quality of the product. These workers work for achieving a common goal with common objectives in their organisation but, they have their own personal, mental and societal needs. When these different needs are not fulfilled and the person feels many obstacles or barriers from the superiors or fellow workers, he becomes depressed and does not want to work more sincerely and finally develops an apathy towards the organisation. It slows down the production rate both in quality and quantity and finally affects the whole organisation.

This is a common practice in all types of organisations irrespective of their type of work, objectives, type of product and number of workers employed. A university functions as the highest temple of learning with a provision of teaching, research and extension. Both teaching and non-teaching employees work in various categories and stages. Interpersonal relations among these workers and finally their relations with the students and society determine smooth running of the university functionaries. In fact, the university is a system and to have cooperation and coordination among different components of the system is essential for easy and smooth functioning. Human relations is a force which brings maximum cooperation and coordination among these components and finally helps smooth functioning of the organisation. This is just like a lubricating oil which reduces friction among the parts of a machine and helps smooth functioning of the whole machine.

The Concept of Human Relations

In general two tendencies prevail in an organisation – 'Job-oriented' and 'Work-oriented. The first tendency of job-oriented has an objective of completion of the work without paying any attention to the workers and their needs. The second tendency is a democratic tendency which believes in the satisfaction of human needs of the workers. If they are satisfied, happy, and their physical, mental and societal needs are satisfied, they would devote all their energies for the completion of the work. Thus the work of the organisation may not suffer. In fact, these two tendencies are contradictory to each other but are essential for the organisation and can't be ignored. Human relations is an art which coordinates both these tendencies for raising the production in quality and quantity. J.W. Getzel (1986) has defined 'Human Relation' as a process of a amalgamation of the needs and role of the administration with the needs and necessities of the workers in such a way which makes the job of the institution more fruitful and gives maximum satisfaction to the workers.

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Robert G. Owens (1920) felt a need of human relation movement in an organisation for its smooth running. He analysed (i) Morale, (ii) Group Dynamics, (iii) Democratic Supervision, and (iv) Good human relations among the workers, as essential factors for a living organisation. From 1935 to 1950 a big movement was experienced for developing good human relations among the workers in various types of organisations. *'The Functions of an Executive'* written by Chester I. Bernard in 1938 brought a turning point in the field of educational administration. It was felt that the workers of an organisation are human beings and they have some needs and responsibilities with some duties too. Fulfilling the need of an individual without any hurt to other fellow workers be done by keeping into consideration others' needs and responsibilities. Every human being working in an organisation needs love, recognition, security and a desire for an upliftment. Mary Parker Follet (1940) emphasised the need to inject Psychology into educational administration, Danniel E. Griffiths (1956) connected democratic process with human relations in educational administration. Recognition to the teacher, his importance and his powers and responsibilities was supposed to get due consideration in every type of educational administration. Mayo (1945) tackle the problems of the workers by stating that a supervisor or manager must act in a leadership role with his work group in order to help group members to fulfil their needs through productive rather than disruptive activities. Mayo in his book *'The Human Problems of an Industrial Civilisation'* has mentioned that the workers do not work for only money, but also, for feeling of unity with the group, morale, and good human relations. These factors, according to Mayo, would increase production and capabilities of the workers. McGregor (1960) found in an experiment that the climate is more significant than the type of leadership or the style of the supervisor. The boss can be autocratic or democratic, warm & outgoing or cool & introverted, easy or tough, but these personal characteristics are of less significance than the deep attitudes to which his subordinates respond. It is important to create a deep and satisfying emotional certainty of fair treatment. Halpin found morale as the key factor for better human relations on the ground that the factor reflects an effective balance between the accomplishment of the task and the satisfaction of social needs.

There is probably a reason for the failure of need satisfaction theory as found by Waller (1932) in a classic study of the educational organisations. He identified the 'tension' that he believed to exist between students and teachers, among students, between the teachers and the Principal, and also among the teachers. In Michigan during a study, Brookner and Lezotte (1977) found that there was tension between Principal and teachers in the schools. They identified a deteriorating trend in improving relations, high moral and self satisfaction in the educational organisation.

Human Relations in Indian Universities

University admits human beings as raw material and they are skilled for different jobs as good resource persons. Thus human resource development is the main objective of a university. The human beings trained and skilled in universities are different in various aspects from one another and no two individuals are the same. The students can't be equated to the clay awaiting the potter's mood, will and wish. There are mainly three activities in a university in the academic field – (i) Teaching, (ii) Research, and (iii) Extension. These activities are supposed to be completed by the teachers in various faculties. They are assisted by research associates/assistants and non-teaching employees help in secretarial work. University authorities act as a link between the funding agencies and faculty members.

Innovation is the mother source of change and the change creates a need for innovation. This process of innovation and change has generated new knowledge for fulfilling the societal needs through research. But, research is a coordinated effort which one can't perform singly. It has many phases from problem selection to report writing. It requires valuable guidance of experts, cooperation of fellow workers, help from sources of information and active involvement of various persons. Above all is the funding agency which provides financial assistance from time to time through university authorities. Thus research is a team work like a system having many components as equally important in the completion of the work. A good human relation among various components is essential. It would help in performing the task in quality and within assigned period of time. Finally, it would help for the personal upliftment of various workers involved in the research project.

In the classroom, teaching-learning seems to be a bipolar process. One pole is teaching for which teacher, content, methodology are the basic things, while, the other pole is learning and the learner, his psychological traits, his background are responsible for the quality of learning. The joining factor between these poles is communication; an effective communication can make effective learning. Teaching-learning is a process of effective communication. This effective communication can be brought by developing good human relations between the teacher and the students. Students among themselves may develop good human relations for free and fair discussion. This is just like a Siphon, where the role of pipe joining the two ends for smooth flow of liquid depends upon the quality of pipe and its adjustment. The function of this pipe is a translated version of human relations in the teaching-learning process. The students may interact with his teacher more and more if there exists a good human relation among them. The progress of any student may not come as hindrance in the way of other's progress. Every individual should get equal chance to express himself or herself in the classroom and the teacher has to be attentive to the verbal and non-verbal communication of each and every student.

The third main activity in the academic spheres of university, is 'Extension'. It is very much essential to communicate with other agencies and universities about the new developments in the field of research done by various faculties. This job can be done by extension work in which faculties organise seminars, conferences, workshops and symposia from time to tome. Interaction is the mother source of generating new knowledge, refinement of the behaviour and adoption of new techniques. This extension job can be well organised if a good human relation prevails among the teachers in the faculty. Requirements of manpower and monetary help for this purpose can be managed if a good human relation prevails at various stages of the university system.

Now-a-days explosion of new knowledge in various fields and the changing needs of the society have compelled breaking of the walls of old faculties and to raise new faculties looking to the needs of the society. This job can be done by framing interdisciplinary studies programmes and it opens possibilities of exchange between individual disciplines and also lends more transparency to the connection among various disciplines and encourages the development of interdisciplinarity in the university. It is clear that one man or one faculty can't start such courses e.g. Rural development requires the help from Education, Science, Agriculture, Sociology, Engineering, Medicine, Commerce and various other faculties. Thus the human relation among various faculties of a university may bring them closer to each other for framing such courses and finally helping the society.

In present day, the university system has become more complex because of big size and a high degree of specialization. These universities are similar to other organisations because of the experts who share periods with others but not ideas. They think themselves as having monopolies over certain aspects of the management system like, Dean of faculty, Heads of various Departments, Director of students welfare, Finance experts and so on. Sometimes they have monopolies over certain technical responsibilities like subject matter specialist, programme developer, etc. They do not want others to take such responsibilities in future and desire to occupy these positions till their retirement. In larger interest of the organisation, the diversity of goals combined with the large number of employees often makes them comparable in complexity with other organisations. The sophistication of their technology, the diversification of their goals, the varied nature of their patterns of structures have increased complexity.

These functions of a university may be complex in nature, but, the only way for a successful completion in a better way is developing a human relation of very high degree among the teaching and non-teaching employees. It will make the university a family. Thus human relation may serve as a catalyst in all activities for raising the speed of work, giving the right direction and for completing it in time.

Basic Principles in Human Relations

1) *The Principle of Leadership*

It indicates that qualities of leadership must be in the leader, leading various faculties or sections. He should be an expert in his field and should be like a captain of the team. It would create a sense of respect for him among his colleagues and they will follow him with a sense of respect.

2) *The Principle of Equality*

All the workers should be treated as equals and no one is superior or inferior to others. They have similar social as well as personal or psychological needs. Everyone should have equal opportunity for their horizontal and vertical growth.

3) *The Principle of giving Freedom*

In universities the workers have to think, interact and draw some conclusions for generating new knowledge. They should be kept in an environment in which they may keep a high morale, self confidence, and a feeling of being in the group. The teachers and the students differ in the status and length of experience; they should have full freedom to express themselves in the group. It will develope a sense of getting recognition and thus a good human relation in the group.

4) *The Principle of Cooperation*

In a university system no one can run all the activities alone. So cooperation is essential for completion of the work. Everyone should have interest in each other. The leader and colleagues should try to motivate each other for a high spirit of work. Collective responsibility requires collective wisdom which is possible only through cooperation among the workers of the group.

5) *The Principle of Justice*

No one is above rules and regulations. It is essential to have a democratic process in the university at all levels. Due recognition to all and equal participation of all workers be ensured in the activities of the university. As far as possible a collective decision should be taken and it should be of interest and favourable to the majority without hurting the university's interests. If possible, the students should also be involved in the University Senate and Syndicate with full opportunity for expression of their views.

6) *The Principle of Recognition*

Every individual is unique and so one cannot do a work in the same way as the other is doing. The need is to assess a person's capabilities, aptitude and several other factors of his personality, and, accordingly the work should be distributed. Thus accepting individuality of a person will increase good human relations and finally help in smooth running too.

Above principles are applicable to all types of organisations for better human relations. In 1918 a commission under the leadership of Laster was formed in U.S.A. for reconstructing the secondary education. This commission reported (i) High importance to human relation, (2) Feeling of friendship, (3) Social life, (4) Feeling of cooperation, (5) Polite behaviour, (6) Facilitation to social behaviour, and (7) Democratic norms, as essential for smooth functioning of the secondary school system. W.M. Ryburn opines, "Nothing will more encourage a man or a woman, a boy or a girl, to greater efforts, than an encouraging recognition of good work done, of sincere efforts made, of good qualities shown. If those incharge of the institutions, and those carrying on the administrative work of departments, wish to enable their colleagues to do their best, they should always realise the value of recognition to all that helps in completion of the work smoothly."

Though, democracy has been accepted as a way of life, yet no essence of it is found in the functioning of universities. British rule has left a system in which an authority feels himself quite different from others. Decentralisation of power is very essential for better human relations. In India, most of the colleges are run by private bodies in which the power lies in the hands of Secretary or Chairman and the Principal is to follow their orders only. Under the circumstances it is to duty of the Principal to act as middle man between the management and the staff, and not as the representative of any side. He has to bring a situation of adjustment instead of confrontation in the institution.

Conclusion

In a university, every teacher is an independent unit busy in generating the knowledge. He, in his job, interacts, discusses with others, expresses a feeling of satisfaction or dissatisfaction. They are living beings having a wish to preserve their individuality by continuing their creativity. Also, the success of any educational programme is based very much on the teachers and other workers. If the teachers and workers develop insight among themselves in a friendly manner and cooperation with each other in taking a collective decision, they will dedicate themselves to their work whole heartedly. The administrator has to develop a climate which may help all in the fulfilment of their psychological and societal needs. It may bring satisfaction, a balanced behaviour and good human relations among the workers. Human relations contribute much in raising the quality of work done by the teachers, developing positive attitude toward the job, making the teacher a happy member of the institution and finally in making him a good teacher.

References

Cambell R.F., & others (1958) **Introduction to Educational Administration.** Boston, Allyn Bacon.

Campbell, C.N. (1952) **Practical Applications of Democratic Administration.** New York, Harper.

Cassetter, W.B. (1971) **The Personnel Functions in Educational Administration. New York, Macmillan.**

Chase, F.S. (1951) **Factors for Satisfaction in Teaching.** Phi Delta, Kappan.

Getzel, J.W. (1968) **Educational Administration as a Social Process.** New York, Harper & Row.

Griffiths, D.E. (1956) **Human Relations in School Administration.** New York, Appleton Craft.

Halpin, A.W. (1956) **The Leadership Behaviour of Superintendents.** Columbus, Ohio, The Ohio State University.

Mayo, Eton (1946) **The Human Problems of an Industrial Civilisation,** London, Harvard University Press.

Owens, R.G. (1970) **Organisational Behaviour of Schools.** New Delhi, Prentice Hall.

Parker, Mary F. (1940) **Dynamic Administration.** New York, Harper.

Roethlisberger, F.J. & Dickson, W.J. (1943) **Management and the Workers.** Cambridge, Mass., Harvard University Press.

On Professionalism Among Teachers

A.P. Sharma*
Usha Sharma**

It is a matter of great concern that the spirit of professionalism either in technical or non-technical fields of work is gradually disappearing in this country. It is more evident in teaching profession. As a result quality of education has been greatly affected since the dawn of Independence. The general standard of our education in comparison to that of the developed countries is conspicuously very low. In spite of various commissions and the new education policies framed to improve the quality of education, the standard has been gradually falling.

There may be various factors which may be responsible for the inadequacies in education, but poor professionalism among teachers is a very evident reason for it. Unfortunately not much attention has been paid to identify the qualities and special characteristics which crystallize professionalism in teachers. Although a great concern has always been exhibited from all quarters about the deterioration in human values, much less has been reflected by our educators on the issue 'what ingredients crystallize professionalism among teachers', though it is directly related to the formation of values.

What is Professionalism?

The word profession though used several times in the teachers colleges, has seldom been clearly defined by such institutions. Teachers working in primary, secondary and at other levels, often discuss and agree that teaching services should be developed into a profession, but the truth is that not much attention has been given to evolve the concept .... 'teaching is a profession'.

If we define the term 'profession' we find that it involves skills and competence related to a particular profession. In fact professionalism implies higher and more dignified meaning. It involves dedication, sense of belonging, honest academic conduct, awareness about social needs and values, good knowledge of subject(s) and genuine interest towards the students and institution. Persons engaged in professions are highly qualified and are experts in their fields, with which they excel from others. Unfortunately most of the teachers belonging to to the teachers' colleges, frequently work in one direction only, that is to develop certain skills in the pupil-teachers. But they often do not contemplate on the fact that more than developing skills, development of qualities like 'identification', 'love' and 'honest academic conduct' are more congenial and useful as well as directly related to professionalism. Although most of the established teachers' colleges do adhere to complete the university courses in the prescribed time limit, they do not try to create in the pupil-teachers the spirit of professionalism – without which their orientation would be incomplete.

The teacher plays an important role not only in the advancement of the educational system, but also in the adequate growth of the social system. Students look towards him for academic leadership, guidance and direction. The teacher is at the base of the entire structure of social change and growth. His role in the present context, when confusion is rampant throughout, is of paramount importance. The fact cannot be denied that there are good teachers who are capable of guiding their students in an excellent manner providing them all the necessary knowledge, but it is also true that there are others who consider the entire teaching simply a casual exercise of very little importance or at the most a routine matter to earn their daily bread. Though there have been from time to time reviews about teachers' service conditions, pay scales, professional advancement and other issues, the qualitative impovement which was expected to come through these efforts, has not taken place. The overall picture is quite dismal and there stands a big question mark on the quality of their performance. Therefore, it is very much needed that values related to professionalism in respect of teaching be identified through research.

Keeping in view the need for identifying such values, certain professional values were selected after going through the relevant literature – much of which was published in the leading journals in our country in the last few years. When the values were thus selected, they were split into two groups – the professional and personal and tentatively a 'value questionnaire' was developed, which was later on sent to the experts belonging to different disciplines of teaching.

Identification of Professional Values

In view of the fact that teaching is not limited to school education only, experts from a wide range of

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professions were selected to whom the tentatively developed questionnaire was sent for their opinion. The experts belonged to the following fields of teaching : (i) Experienced teachers from senior secondary schools, (ii) Medical teaching profession, (iii) Teaching staff from academic colleges, (iv) University teaching staff, (v) Professors and academicians from NCERT, New Delhi, (vi) Educational administrators from the State Education Department who had been active in teaching in the past, (vii) Senior members of staff from established teachers' colleges, and (viii) Members from management bodies of privately run educational institutions, who were actively involved in teaching in the past.

Instructions contained in the tentative value questionnaire for the experts were four-folds :

(i) Whether the experts approved the value(s) placed under either Professional or Personal value category;

(ii) If not, which of the items should be shifted to the respective category;

(iii) Which values should come first and which next in order of priority; and

(iv) In case the experts feel that any value(s) has/have been left out, they may add that under the correct value category.

The experts were requested to return the questionnaire in a month's time. In all out of 20 questionnaires, only 14 were received back. After the responses were analysed, the following value questionnaire was evolved.

(a) Professional Values

1. Teaching is taken as pleasure, not burden.
2. Teaching is made interesting and stimulating.
3. Good teaching requires originality, innovation and creativity.
4. Good preparation is needed before presentation.
5. Good quality of teaching involves teacher's interest and concern for it.
6. Teaching is imbeded with a sense of humour.
7. New devices frequently used in teaching.
8. Teaching work is evaluated and improved through self-reflection.
9. Making teaching effective by accepting others' criticism, opinions and advice. Academic enquiries of colleagues are respected and responded.
10. Good teaching involves adequate knowledge of modern methods and techniques.
11. Sufficient knowledge of subject(s) and allied material needed to expand the frontiers of knowledge to make teaching effective.
12. Professionalism implies teacher's engagement in scholarly activities and research.
13. The teacher must possess genuine interest in students' welfare.
14. Students are treated sympathetically and informally by the teacher outside the class.
15. Students are encouraged by the teacher to read good and standard material.
16. Students' difficulties willingly removed by the teacher.
17. Students are encouraged to talk matters of their interest and concern.
18. Understanding and attending to students' needs.
19. Displaying dedication and sense of belonging towards teaching profession.
20. Possessing an honest academic conduct and students treated fairly in marking and grading.
21. Possessing good knowledge of latest examination or assessment techniques.
22. Awareness about social needs and values.
23. Regular contact with parents (parent-teacher association) is made by the teacher.
24. Knowledge and awareness about students' social activities is kept in view and they are advised in that light.
25. Good, appropriate and effective speech needed while teaching.
26. Performing duties of citizenship and participating in community activities by the teacher, keeping in view his obligations towards the community and the country.
27. Procedures such as research, travel, attending conferences, professional meetings, seminars and workshops, etc. are adopted to perpetuate professional growth.

Besides the above mentioned professional values, some personal values which are directly related to gear up professionalism among teachers, were also identified on the basis of the experts' opinion.

(b) Personal Values

1. Good personal appearance.
2. Pleasing manners.
3. Progressive attitude.
4. Self-reliant and confident
5. Possess scientific attitude.
6. Congenial relationship with the colleagues.
7. Undisturbed by personal criticism.
8. Personal grudges against the management do not affect work.
9. Possess emotional stability.
10. Possess adjustment qualities.
11. Considerate.
12. Adhere to regularity.
13. Adhere to patience.
14. Self-disciplined.
15. Friendly.
16. Honest and sincere in all respects.
17. Possess love for students.
18. Sympathetic.

In view of the above values the teacher can hopefully develop the spirit of professionalism in him and justify his role by realising the desired goals. Every teacher has a duty to his profession. The most important is developing and improving his scholarly competence. For that he needs to do more work and devote more time in critically examining 'what is known' and expanding knowledge in his chosen fields. Every teacher is accountable to the community and therefore responsible to provide quality education.

The primary purpose of education in our country should be to develop the qualities of citizenship among the people so that our freedom can be safeguarded and democracy, which has been obtained after a lot of toil, can be retained. It is quite imperative today that our national ideals are maintained as well as educational opportunities provided to all, irrespective of caste, colour and creed. In fact quality of education perpetuates the ideals, motives and values which are essential for developing ideal citizenship. Therefore, whosoever chooses teaching as a career, must assume the obligation to conduct himself in accordance with the principles of professionalism. Without that neither his task is complete nor teaching will ever be pragmatic.

References

Books

1. Fraenkel, Jack R. **How to Teach About Values.** New Jersey, Printice-Hall 1977.
2. Gupta, N.L. **Value Education: Theory and Practice.** Ajmer, Krishna Brothers, 1986.
3. Power, Edward J. **Philosophy of Education.** New Jersey, Princtice-Hall, 1982.
4. Taylor, Harold. **On Education and Freedom.** New York, Abelard- Schuman, 1954.

Ph.D. Thesis Published from 1978 to 1983

1. Agarwal, Y.P. "Motivational factors in teaching as profession".
2. Arora, K. "Difference between effective and ineffective teachers."
3. Gupta, R.P. "A study of some factors considered to be helpful in class teaching."
4. Wadhawan, C.L. "Relationship between the social backgroud and professionalism".

Articles

1. Bajaj, K.K. "Social change through students and teachers". **University News** 9 March, 1992.
2. Mehrotra, R.C. The role of teachers in the academic advancement and administrative management of the universities". **University News** 13 July, 1992.
3. Pande, Manisha & Chandra, Arvinda. "Role of teachers in higher education". **University News** 30 March, 1992
4. Sharma, A.P. "The need of professionalism in teachers". **Teacher-Today** Jan-March, 1991.
5. Sharma, A.P. "How to inculcate values among youth". **University News** 17 June, 1991.
6. Sharma, A.P. "Growth of personal and professional qualities during in-service programmes". **Journal of Indian Education** May, 1981.
7. Sharma, J.N. "Citizenship development with special emphasis on value education". **University News** 15 June, 1992.
8. Suryakanthi, A. "Professional Ethics". **The Educational Review** Vol. XCVIII, No. 7, July 1992.

Teaching Learning Process in Higher Education

Sociological Considerations

Hem Lata Talesra*

Education is a process which helps the achievement of a purposeful living in society. The right type of higher education provided on an adequate scale, can bring about social transformation, economic growth and modernisation leading to national development. According to the Robbin's Committee Report of U.K. (1968) and Carnegie Commission Report on Higher Education set up in USA (1967), the main purpose of higher education should be to build up a healthy society and development of social values among students. According to the University Education Commission Report (1948-49), "Education is an invitation into the life of spirit, training of human souls in pursuit of truth and 'practice of virtue". The report of the Education Commission (1964-66) outlines the functions of higher education as full development of the youth – physically, socially and morally. The National Policy on Education (1986) recommended fostering the spirit of social responsibility and creative thinking among students. According to Ramamurti Committee's recommendations university students should be given additional responsibilities for community service.

In the light of these recommendations some sociological factors should be considered in teaching learning process.

Talcott Parsons in "*The school, class and its functions*" mentions that in an industrial, urban society education has to perform two functions : 1. Socialization, and 2. Selection. Education has to develop commitments and capacities in the process of development. In a developing society the individual has to commit himself to the common values and norms of the society. And then his further commitment is towards the performance of the specialized role assigned to him. Socialization in the field of commitment has to take two forms : (a) Commitment to values, and (b) Comitment to the performance of specialized roles. Education should impart skills necessary to perform roles. The individual should be helped to develop capacities for carrying out the role, responsibilities and the expectations of his group.

The second function of education given by Parsons is selection. It means "allocation of human resources within the role structure of the society". The individual in an industrial society has voluntaristic mode of action where he has to depend on selectivity of different roles. The society now has taken a new model which prescribes the role sets charged with the values of achievement, universalism, specificity and affective neutrality. In such a situation of planned and committed society the role of education, therefore, assumes significant importance.

A society consists of many groups, groups of some relative permanence being family, community, class, caste, religion and government. These groups constitute the social organism of society. The groups have interrelations and interactions in the complex of society. The characteristics and contributions of these social groups affect education and the students should have the knowledge about the social groups.

The newly envisaged scientific order of society has widely affected the structure of educational system. Educational system "refers to the major institutions, associations and personnel for formal education". In the new context the Indian society has become science and technology oriented. Here we would refer to the democratised higher education of the country.

At the different levels of university education there has been a gain in postgraduate and research activities. The strides taken by the country in regard to the university education and more specially science, professionals and agricultural education are not without sociological problems.

The country has created an atmosphere for development of science and technology. The new structure of education has affected the selectivity of the various sub-structures of society; namely family and kinship, community, class and caste. This should be considered in the teaching of college students.

In the context of modernizing Indian society, the institution of family has received new horizons. Most of the functions of family have now been taken up by secondary groups. The forces of modernization including education have tended to break the traditional Indian joint family. The structural changes that we have envisaged in the Indian family has its effects on the educational system and this should be considered. Family occupied the main axis on which personality structure is built. The main objective of education is to prepare the student to take up efficiently his adult occupational role.

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The main aspects of Indian social stratification are the caste and the class systems. Castes are classified into the latter being a category granted some constitutional safeguards and securities. These constitutional efforts provide equal opportunities to backward castes and classes. The class categories are in our country dominant social determinants of educability. The students must know about the provision of equal opportunities.

With the advancement of industrialism when the economy shifts from agriculture to manufacturing and then to service industry, it very significantly affects the nature of educational institutions. Actually in such a situation the demands of society vary from manual to mental and from low to high degree of skills. In fact, with the advancing industrialisation the educational threshold of employment rises and in the Indian situation education has become a prime need for developing our economy. Industrialization emphasizes research for pushing up more production perhaps at the level of sophisticated electronics. Higher education and research is the supplier of scientists and engineers for accelerating technological advance. In this situation some problems of sociological interest may also emerge wherein there may be lopsided development, in the sense that educational institutions over produce technicians and skilled persons thereby increasing employment.

It is a universal truth that education is an instrument of social change and national development. One of the basic assumptions of educational planning is that it should prepare the youth of today to meet not only the challenge of today but even the shock of the future. It is one of the basic and prime responsibilities of education to help develop human values among the students.

According to Toffler any education system operates on two levels, 'the overt and the covert'. At the overt level, the components of teaching and learning tend to be local, i.e. having a localised relevance. At the covert level certain basic values such as punctuality, self-reliance, social responsibilities, etc. are sought to be inculcated. It is this that we desire to have in our youth and it is this which we find missing from our educational institutions. We have to seriously think how best to regenerate our educational system, so that it could promote in our youth national integration, character-formation, ethical and moral values.

Factors that have contributed to the change in the classrooms of colleges and universities are the following :

(1) Socio-political environment which has been getting super charged for a number of reasons.

(2) Preparation to face economic challenges like unemployment.

(3) Reached the remotest corners of the country through their programmes.

(4) The media have been successfully establishing and operating a participatory model of teaching.

(5) Continually shaped and motivated by new technologies on the one hand and new social dynamics on the other.

Develop new directions in order to quicken the mind, the heart and the soul of the learner so that he might develop attitudes, interests, skill and behaviour for the pluralistic world of tomorrow.

New Directions

(1) Teaching should be multi-linear and pluralistic offering numerous options to the learner in keeping with his capabilities, interests and aptitudes.

(2) Teaching should be an on going self evolving activity that should unfold itself in the context of the subject, its thrust points, the learners' responses and the teaching learning environment which obviously will be a flexible variable at a given point of time.

(3) Teaching should be democratic and participatory process rather than a prescriptive unipolar process.

(4) Teaching should be essentially an interactive process. It should promote abundant give and take in all forms.

(5) Teaching should be a creative activity.

(6) Teaching should be emotionally a joyous and spiritually an uplifting experience both for the teacher and the taught.

(7) Task involving consideration i.e. action research, library work.

References

1. Bierstedy and Robert. **The Social Order**. New York, McGraw Hill.
2. Bogardus. **Sociology**. 3rd edition. New York, Mac Millan.
3. Education Commission 1964-66. **Report**. Delhi, Ministry of Education, Government of India.
4. Gettys, Dewson. **Introduction to Sociology**. 3rd edition. New York, Ronald Press.
5. Havighurst and New Garten. **Society and Education**. Boston, Allyan & Bacon.
6. Hopkins, Pryns. **The Psychology of Social Movements**. London, Allen & Unwin.
7. National Education Policy, 1986. Delhi, Ministry of Human Resource Development, Govt. of India.
8. Ottaway. **Education and Society**.
9. Parsons, Talcott. **The School, Class and its functions.**
10. Smith, W.O. Lester. **The Impact of Education on Society**. Oxford, Basil Blackwell.

Using the Microcomputer in the Classroom

Asish Das*

The personal computer or microcomputer is one of many pedagogical tools available for classroom use. Depending on the area of teaching, the computer can replace or augment such standard devices as the hand calculator, typewriter, programmed learning workbooks, and simulations.

As with all teaching tools, the computer requires a great deal of preparation by the instructor. The computer must be integrated with course content in a manner consistent with course objectives.

This article outlines several of the factors one must consider in developing a computer component for a course. It will consider the positive and negative aspects of computer use from both the students' and instructor's perspective, common myths about computer usages, ways to approach the process of planning computer usage, and places to look for inexpensive teaching oriented software.

The Computer as a Teaching Tool

At least three objectives are tied to classroom use of the computer. First, teaching students to use computers gives them skills sought after by future employers.

Despite the emphasis on computer literacy that is supposedly sweeping the public school system, many post-secondary instructors are finding that a large portion of their students, both those of traditional age and adult learners, have little, if any, computer experience. A sizeable number of students have never taken a basic typing course in high school much less a "keyboard" class teaching typing skills on the microcomputers.

Even many students with computer experience are coming to class with minimal word processing or data entry skills. Some have been using hard disk machines bought with a package of programs installed by a retailer or a friend. These programs are often loaded via a DOS shell : the student simply turns on the computer, sees a menu on screen, highlights a program name with the cursor, presses "enter" or clicks a mouse, and the program begins. Someone with this level of experience is unable to install a new program or accomplish any other non routine task.

Second, computers can be used as alternative mechanisms for transmitting course content. This can be done in class, in a laboratory setting and/or as home work brought back into the classroom for discussion.

Third, computer usage immerses the student in a series of activities that develop patterns of systematic, logical thought and analysis. Working with a simulation, spreadsheet, statistical package, and most other categories of software requires careful planning of actions to be taken, including thought about the results of these actions to be taken, including the results of these actions and the next steps needed to complete a task.

The computer forces students to deal with the consequences of their own actions. Students learn that a computer follows the syntax and logic given to it by a programmer. When the results of computer work are unsatisfactory, students eventually come to understand, however grudgingly, that their own lack of attention to details, failure to plan, and attempts to short cut procedures, are at fault – not the computer.

Especially useful lessons of logic can be taught using a computer simulation. Sometimes, simulation programmers manipulate the logic and available alternatives to predetermine a decisional outcome or its impact. Discussion of the manner in which underlying assumptions, basic definitions, and decision rules can affect outcomes is a useful teaching device over and beyond any factual information transmitted. Many simulations have the added advantage of being inherently enjoyable and interesting.

Computer Users Section

The Computer Users Section is one of the newer sections of the American Political Science Association. It publishes a Newsletter that includes reviews of recently released software and general information in hardware and computer databases. The Newsletter is sponsored by the Social Science Computer Review and therefore taps into that journal's information sources. The materials reviewed cover software in all cost ranges and categories. The main emphasis is on software of interest to experienced users. Computer Review published by Duke University Press is another excellent source of such information.

Developing Your Own Computer Exercise

A variety of sources are now making data available on disk for class and research use. With such material one can develop exercises appropriate to a specific class. An example of data available on disk is Facts and Figures on Government Finance:1990 Edition, published by the Tax Foundation through the Johns Hopkins University Press. It presents federal, state and local spending and tax data and is available in hard cover, paperback and diskette form. The diskettes are available in IBM (5-1/4" or 3-1/2") and Macintosh formats for approximately $ 200.

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If your department or library does not have the funding to purchase such materials, there are many public records that may be used. For example, in voting behaviour and political behaviour courses, they have introduced students to data analysis using aggregate voting statistics and census data. The students input data into the computer using a statistical package or spreadsheet with each student covering a different election. The separate data inputs may then be combined into a master file and used for data analysis by the entire class. The same file is saved for future use.

The public budgeting introduce students to a spreadsheet program and the MYSTAT statistical package, which they then use for forecasting. We take them through various forecasting techniques in order to show the students the impact of using each technique. Budgetary data for your state could be collected for such an exercise.

The undergraduate research classes develop and administer their own questionnaire. The resulting data are fed into computer and analyzed by the class. The data are then saved and used as example material and for exercise in other research classes.

Teachers' own research files are also cycled into teaching. They input all of our data using a spreadsheet. This allows them to input the data into various statistical packages for analysis purposes and into word processing packages for exercise development. Using teacher's data has two advantages :

(1) They already have a large amount of analyzed material making exercise development relatively easy; and

(2) by tying the materials to their own research in class discussion they give practical reinforcement to the importance of research in political science.

Overall, the use of the computer should by presented as an enjoyable activity, not a chore. The computer should be treated as a convenient, time saving tool that is there to assist the students. An Instructor with a positive approach will find that teaching with the computer can be fun.

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Scaling New Heights

"Modern man has to his credit incredible achievements in the areas of science and technology. He trod on the surface of the moon and is planning to conquer the other planets as well. Such achievements lead to an immense material progress, but the progress cannot be total and beneficial unless the qualities of head and heart blossom along with it. The capacity to lead man to heights is inherent in literature and fine arts. Fine arts like Dance and Music not only bestow on him a bliss but also promote ethical and humane values in him turning him into a greater man", said Padma Vibhushan Dr Mangalampalli Balamuralikrishna. He was delivering the Convocation Address at the third convocation of the Telugu University, Hyderabad. Excerpts

The land of the Telugus is a land of plenty and prosperity – Annapurna, and in the realm of arts Goddess Saraswathi herself. Language and literature, culture and fine arts are all entwined on this Telugu land over the past many centuries to form into a priceless treasure. The Telugu University is developing as a unique organisation to protect, preserve and pass on this treasure to the posterity. Seen against this background the Telugu University which is engaged in study and dissemination of Telugu culture is a magnificent institution. It gives me a greater pleasure to note that along with History, Culture, Literature and Language, Fine Arts occupy a significant place here. Training is imparted to young men and women in Karnatic Music, Kuchipudi Dance, Folk Arts, Sculpture, Violin, Veena and Theatre Arts.

The Telugu University has restored to proper place of honour the Karnatic Music and the Kuchipudi Dance which originated on the Telugu land and is appreciated the world over. This is a matter of happiness and pride for all art lovers. Besides, this University started B.A. course in Mridangam, which has mainly been an accompanying instrument so far. As an artiste, I feel elevated and proud to note the opportunities provided by this University for training in fine arts.

The role of fine arts in protecting and developing the ethical and human values is universally recognised. Modern man has to his credit incredible achievements in the areas of science and technology. He trod on the surface of the moon and is planning to conquer the other planets as well. Such achievements lead to an immense material progress, but the progress cannot be total and beneficial unless the qualities of head and heart blossom along with it. The capacity to lead man to heights is inherent in literature and fine arts. Fine arts like Dance and Music not only bestow on him a bliss but also promote ethical and humane values in him turning him into a greater man.

It is a happy augury that the Telugu University is striving to achieve such a balance in a unique way. The land of Andhras is a significant spot on the earth. I recall what I heard in my younger days: 'As the great serpent-king Adisesha, bears earth on his hoods, the particular part that comes into contact with his head is the Andhra Desa itself. Of course, this may be a sweet and palatable exaggeration. Nevertheless, this is the meeting place of the cultural streams of the North and the South. Along with Telugu, Urdu and Hindi also have flourished here.

In recent times Indian Music had been categorised into Hindustani and Karnatic. In a way political considerations in the North had been behind such a classification. But, in fact, no ancient treatise mentions this division. Karnataka is defined as that which appeals to the ear. In this sense, it is the South Indian tradition that is entitled to be called the Indian Music. Arguments can easily be advanced to assert that the South Indian music is the richest of all traditions and that it approximates the music of the World. Any one proficient in South Indian Music can comprehend, follow and render in any other tradition of the music. It is not as easy for others. One can find a good number of South Indian musicians who have reached heights in the music of the North or of the West. On the contrary, no Western musician or North Indian musician has reached an appreciable level in the South Indian music. Is it not enough to claim the greatness of the South Indian music? Even so it is regretable that we are not able to recognise the greatness of our artistes unless and until they are first recognised in the other parts of the country or in the West. Anyway, the recent developments, in this area are some what heartening.

It is a happy thing that outstanding works of indisputable authority have been produced on the Telugu land about music, literature and dance. Andhra has been a key centre for national integration all through.

I do not approve of the oft-heard observation that standards in education are falling. We are now living among better facilities. We have greater scope for research now. Sound, sound waves and vibrations of the physics approximate to note, pitch and rhythm of the musicology. New musical instruments that were not heard of earlier entered the field. Science has presented to music Microphone, Television, Radio, Tape recorder, etc. If such things were available in the past we could have been privileged to listen the Kritis of Thyagaraja as he sang them and to see and enjoy the dance of Lakuma Devi, the dancer of the age of Reddi empire. The folk songs and art-forms are gaining greater attention today. This University should take up the onerous responsibility of recording eminent artistes and preserve in archives for the benefit of the future generations. The University has already undertaken a programme to tape on Video cassettes documentaries about eminent Andhras.

'Telugu University' should not be misconstrued as reflecting parochial emotions. The object of this University is to provide a forum which would clarify that the culture of the Telugus is a valuable component of the world culture. This should become an instrument to co-ordinate the Telugu culture with other cultural streams at the national and international levels.

I may point out a fact about practising and analysing music. It is rare that musicologists ever made fine musicians or vice versa. Those who follow music in the light of musicology may be good scholars but not eminent musicians. That does not mean that an artiste need not concern himself with science of music. It is essential to balance these two elements. I wish the Telugu University will work to co-ordinate these two essential factors and produce scientists of music and scientific musicians as well. I feel that the University should recognise the need for introducing the time honoured gurukula system into such studies.

Telugu is considered as one of the best among the languages of the land but in the case of music it is the only efficient medium. It may be noted that great composers of even non-Telugu origin composed and sang in Telugu. Still there are not adequate facilities for research in music, creating a situation of having to migrate to other parts of the country for research. I hope that the Telugu University will initiate measures to rectify the situation.

An artiste needs recognition. He draws his sustenance from it. The Telugu University has recognised this fact. I hope the Goddess of Telugu fine arts will fill the campus of this University with her divine music to the rythm of her anklets.

Music removes physical illness and bestows health as discovered by researchers. Researches in this area are being carried out at various places. I too am engaged in a significant research project. This is not the time and place for enumerating my findings. Notes and rythm of good music promote good health. The key is contained in locating the places that produce the notes. The sakti that represents the note, pitch and rythm emanating from 'Om Kara' assumes the form of 'Murali Gana'.

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CAMPUS NEWS

Orientation Course in Computer Science

"Technology cannot be a substitute for social transformation, but may however help to induce changes," said Prof. V. Bhaskara Rao, Principal of the University College and Member, Board of Management of Kakatiya University. He was speaking as the chief guest at the valedictory function of 8-day orientation course in computer science organised for the degree college teachers by the College Development Council of Kakatiya University in collaboration with Andhra Pradesh Akademi of Sciences and Andhra Pradesh State Council for Higher Education, in Warangal recently.

Prof. Bhaskara Rao said that the countries passing through between the past glory and the future ambitions for modernisation, had to select their path carefully at the present moment. Computers, if utilised properly, would lead to creating more employment and comfortable living, Prof. Rao felt.

Prof. A. Shankaraiah, Registrar of the university, who presided, said that computers had seeped into every field of human activity and ensured accuracy in decision making. He stressed the need for organising such programmes in computer science at least once a year for the benefit of teachers. This, he hoped, would go a long way in updating their knowledge and learning latest techniques in the use of computers in these days of fast changing technological advancement in a developing country like India.

Prof. Dinkar Sirdeshmukh, Dean of the College Development Council, in his report said that since the UGC had stopped direct funding to universities for conducting orientation and refresher courses, the universities should make specific provision in their budget for organising these courses. He said that 24 teachers from 15 degree colleges affiliated to the university attended the course which included laboratory work, programming session, visit to the REC mainframe system and panel discussion on computer syllabus. The guest faculty was drawn from Osmania University, Institute of Public Enterprise, Computer Maintenance Corporation and REC besides the Kakatiya University.

Speaking on the occasion Prof. B. Kesava Rao, a senior faculty member in Mathematics, emphasised the need for developing multi-disciplines with computer science component under regular study at the university leaving conventional courses to the care of nonformal educational agencies. He pleaded for the introduction of MCA course at the university, to begin with, on a self-supporting basis, to give a lead to the teachers at the undergraduate level by developing certain models and standardising them.

TN State Council for Higher Education

The Tamil Nadu Government is reported to have constituted a State Council for Higher Education following the enactment of the "Tamil Nadu State Council for Higher Education Act, 1992."

The main functions of the Council will be to promote cooperation and coordination of higher education institutions, to encourage innovations in curriculum development, to coordinate among universities, colleges and other higher education institutions, and to facilitate training of teachers in universities and colleges.

The Council will encourage sports, games, physical education and cultural activities, identify centres of excellence in the universities and assist the UGC for determination and maintenance of standards and suggest remedial measures wherever necessary.

The Council will have the State Education Minister as its Chairman and Mr. S.V. Chittibabu, former Vice-Chancellor, Madurai Kamaraj and Annamalai Universities, as Vice-Chairman.

The ex-officio members of the Council are: The Secretary, Education Department; the Secretary, Finance Department; the Secretary, UGC (or his nominee); the Commissioner of Collegiate Education and the Director of Technical Education.

Mr. K. Aludiapillai, a retired IAS offical, will be the Member-Secretary. The other members named are: Dr. Malcolm Adiseshiah, educationist, Dr. V. Srinivasan, former Director of Technical Education, Mr. A.C.Muthiah, industrialist and Chairman, SPIC, Dr. S. Muthukumaran, Vice-Chancellor, Bharathidasan University, and Dr. K.S.Lakshmi, Vice-Chancellor, Mother Teresa Women's University.

Chemistry & Biology – An Interdisciplinary Approach

A three day National Seminar on Emerging Trends: Chemistry and Biology an Interdisciplinary Approach was recently held at Zoology Department of Lucknow University under the auspices of National Academy of Chemistry & Biology (India). The seminar was inaugurated by Shri. B. Satyanarayana Reddy, Governor of Uttar Pradesh while Prof. M.S. Sodha, Vice-Chancellor, Lucknow University presided.

In his inaugural address the Governor stressed the need of interdisciplinary approach in solving problems faced by mankind. Prof. Sodha in his presidential address welcomed the present interdisciplinary approach to work for the common good. The inaugural function was followed by the keynote address by Prof. K.C.Joshi of Rajasthan University. According to him a gulf exists between chemists and biologists even in advanced western countries. Nobel Laureate Arthor Kornberg, the physician turned biochemist who first syntheised DNA, told American Association for Advancement of Science a few years ago that even the explosive growth of biochemistry has not bridged the gap and scientists of both the disciplines continue to live in their own worlds.

The past two decades have seen tremendous advances in the field of molecular biology. This should have unified the disciplines of medicine, chemistry and biology. However, due to a very rapid growth in a short time, the biologists tend to give more attention to major biological problems of cell growth and development while the chemists find the chemistry of biological systems either too mundane or too complex. Thus, the polymer chemists are frightened by the size and complexity of nucleic acids and proteins and by the fact that these molecules associate intimately with water. Medicinal chemistry used to be a preserve of organic chemistry but due to the increasing constraints in introducing new synthetic drugs the pharmaceutical companies are shifting to biological molecules. In fact their Executives – being wise businessmen – see more clearly the urgent need to merge the two cultures of chemistry and biology.

In all 15 plenary lectures and 42 research papers on health related topics were taken for presentation at the seminar. The major emphasis of the plenary lectures appeared to be on parasitic diseases. According to Dr. R.S. Varma of Lucknow university filaria and leishmania are the two parasitic diseases which are prevalent in tropical countries affecting millions of people. Dr. R.K. Chatterjee and Dr. Satyavan Sharma of CDRI presented various aspects of filarial infection and its treatment. Dr. D.S. Bhakuni and Dr. A.P. Bhaduri also of CDRI, presented current status of leishmanial disease and modern drugs available for its treatment. According to Dr. Bhakuni purine and pyrimidine nucleosides which have been used in the treatment of cancer can be suitably modified to generate drugs for leishmania.

Dr. S. Ray of CDRI narrated the story of centchroman (centron-Torrent) the World's first non-hormonal once a week OC contraceptive. Prof S.P. Singh of Kurukshetra University reported the concept of photoactivated insecticides to control the population of harmful insect without causing damage to other organisms. Prof. K.N. Trivedi of M.S. University of Baroda reported useful photodynamic furocoumarins. Various aspects of modern day beta lactams were discussed by Prof. A.K. Mukerjee of BHU. Prof. R.A. Misra also of BHU discussed the role of superoxide ion in biological oxidation. According to Prof. K.C. Joshi of University of Rajasthan fluorine element has assumed greater significance in modern medical procedures. Fluorinated drugs are now used for medical diagnosis. Scope of enzymes in molecular biology was outlined by Dr. S.K. Trigun of BHU. Presentation of plenary lectures was concluded with a popular lecture on migratory Siberian cranes delivered by Dr. G.N. Verma of Zoology Dept., Lucknow University.

In the paper presentation sessions synthesis and antiinflammatory activity of beta-aminoxy propionic acids was reported by Ms Sangeeta Sudan of Jammu University. Dr Sudha Jain of Lucknow University described normal and aberrant biosynthesis of papaverine a biologically active alkaloid from Indian medicinal plants, while Dr. V.L. Sharma of CDRI reported antidepressant activity of 3-aryloxy-3-phyenylpropylamines. Dr. S.K. Nigam of NBRI reported the isolation and characterisation of a naturally occuring coumarin with remarkable antiinflammatory activity.

Paper presentation was followed by Poster presentation. The poster presented by Ms Amita Shukla of Lucknow University was adjudged the best followed by those of Pramod Kumar, CDRI and Dr. J.K. Misra of Sri Jai Narain Degree College. The closing function was presided over by Prof. K.N. Trivedi of M.S. University Baroda.

The following recommedations were made at the seminar: (1) Seminars on interaction of Chemistry of Biology should be organised at regular intervals say annually; (2) Close cooperation between university and college teachers on one hand and research institutes on the other to be encouraged; (3) Research efforts to control parasitic diseases should be strengthened with special reference to filaria and leishhmania; (4) Workshops and demonstrations should be arranged in the rural areas to create scientific awareness of hygienic living environment; and (5) It was emphasised that efforts should be redoubled to preserve flora & fauna in order to save humanity from the ill effects of disbalance to the ecosystem.

Training Opportunities for Varsity Administrators

The Centre for Work Study in Educational Administration, Panjab University, proposes to organise a Training Programme on "Methods and Procedures Improvement in Offices" from January 6-18, 1993. The objective of the programme is to familiarise the officers and officials with various techniques of improving methods and procedures of work in offices. The participants may comprise officers and officials from various universities and educational institutions in India.

Other training programmes proposed to be organised by the Centre are (1) Work Measurement and Developing Work Norms in Offices (January 20-31, 1993), and (2) Organisation Analysis and Organisation Designing/Structuring (February 3-13, 1993).

Further details may be obtained from Prof. Shital Parkash, Hony. Director, Centre for Work Study in Educational Administration, Panjab University, Chandigarh -160014.

Banks and Regional Development

The Department of Bank Management, Alagappa University recently organised a seminar on 'Banks and Regional Development'. Inaugurating the seminar, the Vice-Chancellor, Dr. K Nagappan emphasised the role of bankers in regional imbalances.

Mr. S . Kasiviswanathan, President of the Rotary Club, in his presidential address requested bankers to concentrate on entrepreneurial development as a prelude to regional development. He reiterated that bankers had to undertake this challenging responsibility to achieve the eighth plan target of offering employment to all eligible citizens by 2000 A.D.

The Regional/Divisional Managers of various banks, who attended the seminar, elaborated the role and achievements of their banks in regional development. All their papers formed the base for interactions between learners and experts.

Nehru Awards for Swaminathan,Godrej

Eminent agricultural scientist Dr. M.S. Swaminathan and well-known industrialist and environmentalist Mr. S. P. Godrej have been chosen for the 1992-93 Jawaharlal Nehru awards given by the Indian Science Congress Association (ISCA). This was announced recently in New Delhi by Dr. S.Z. Qasim, Member of the Planning Commission and general president of the ISCA.

The awardees are expected to deliver one lecture each depicting the concepts and values of Pandit Jawaharlal Nehru.

The award was instituted by the association in 1989-90 on the occasion of the birth centenary of Pt. Nehru. The awards are given each year to a well-known scientist and a person from the social and public life of the country.

Pran Vohra Award 1992

Dr. Ashwani Sharma, a scientist in the dairy cattle breeding division of the National Dairy Research Institute, Karnal has been given the prestigious Pran Vohra award for 1992 by the Indian Science Congrees Association. The award carries an amount of Rs. 5000 along with a certificate. Prime Minister P.V. Narasimha Rao will present the award to Dr. Sharma at the 80th session of the Indian Science Congress to be held at Goa under the auspices of the National Institute of Oceanography and Goa University from January 3 to 8, 1993.

The award is given to a young scientist of the country every year for his contribution to agricultural sciences.

News from Agricultural Universities

National Seminar on Coastal Agriculture

A national level seminar on 'Strategies for Coastal Agriculture in Twenty-First Century, was recently held at the Konkan Krishi Vidyapeeth, Dapoli (Maharashtra) under the auspices of the Indian Society of Coastal Agricultural Research (ISCAR).Shri L. R. Hatankar, Minister of State for Public Works, Fisheries, Ports and Kharlands, Maharashtra State, inaugurated the seminar. In his adress Shri Hatankar said that 'the problems of coastal agriculture are different and special efforts are needed for solving those problems'. Though the agricultural scientists have developed useful technologies for the coastal area, the farmers from the coastal area had not received the benefits of these technologies to the desired extent. It was, therefore, necessary to gear up the extension education activities in the coastal area, he added.

Dr. S.B. Kadrekar, Vice-Chancellor, Konkan Krishi Vidyapeeth, in his keynote address said that there was a scope to augment crop productivity and achieve sustainable production through ecological security, crop intensification as well as diversification, appropriate farming system by integration of livestock, aquaculture and development of off-farm activities. "Alongwith all the above agricultural development strategies, rural electrification, rural communication, dynamic research and technology transfer centres, appropriate government policies having rural bias and promotion of group endeavours are equally important for development of villages and villagers in the coastal belt. The benefits of changing food habits all the world over towards horticultural products and marine products, availability of sea transport at low cost, and favourable situation for growth of horticulture, aquaculture and allied sectors can be reaped to develop and sustain the coastal region as the foreign exchange earning belt", he added.

Dr. J.S.P. Yadav, President of the Society, reviewed the scenario of Indian agriculture and observed that heavy pressure of fast expanding population, declining land-man ratio, inefficient and inadequate use of various inputs, degradation of soil, water and environment, weather aberrations, incomplete transfer of improved technology, and insufficient infrastructure of processing, preservation, transport, marketing and credit facilities were the most important constraints to agricultural progress of our country. "The coastal areas have vast untapped potential of natural resources. The future R and D programmes should include such strategies with holistic approach as to make the entire agriculture a more location specific and dynamic enterprise. The technology should be tolerant to various stresses and should aim at an efficient integrated package of synergistic action plan with a discrete goal of increased productivity, profitability and sustainability of the diversified farming system", said Dr. Yadav. According to the strategies for intensification and diversification of agriculture, sustainability of high productivity, greater use and efficiency of various inputs, modification of plant type and soil condition, economically viable, locally adaptable and socially acceptable technologies, and adequate processing, marketing, distribution and credit facilities needed priority attention of the people concerned.

The ISCAR felicitated Dr. Kadrekar and Dr. Yadav by offering the Fellow Awards for their valuable contribution in the development of coastal agriculture. The souvenir and a research bulletin, 'Coastal saline soils of Maharashtra' brought out by the Konkan Krishi Vidyapeeth, Dapoli were also released on this occasion.

The four-day seminar was attended by over 50 soil scientists from different coastal states of the country at which 39 research papers were presented in six technical sessions.

News from UGC

Countrywide Classroom Programme

Between 8th December to 14th December, 1992 the following schedule of telecast on higher education through INSAT-1D under the auspices of the University Grants Commission will be observed. The programme is presented in two sets of one hour duration each every day from 1.00 p.m. to 2.00 p.m. and 4.00 p.m. to 5.00 p.m. The programme is available on the TV Network throughout the country.

Ist Transmission

1.00 p.m. to 2.00 p.m.

8.12.92

"The Halogens"

"Adieu to Body Fat"

9.12.92

"Getting Ready for Magnification – II"

"Cologne – A City Portrait"

10.12.92

"Paul Emile Victor : Explorer of the Polar Regions"

"The New Narrative of Latin America – II"

"Career Guidance : Education"

11.12.92

"Personal Identification"

"Evaluation – I"

"The Visual Environment and Behaviour – I"

12.12.92

"Theatre in Society – II"

"Within Frame"

"Week Ahead"

13.12.92

No Telecast

14.12.92

"Electromagnetic Induction"

"Innovation : Antarctic Paradox"

"Poseidon"

IInd Transmission

4.00 p.m. to 5.00 p.m.

8.12.92

"Preparing a Standard Solution"

"You and Your Blood Pressure"

"Echography"

9.12.92

"SPOT : Picture a la Carte"

"Exoskeleton in Amniotes"

"Bishnupur Temples"

10.12.92

"Emma"

"19th Century Russian Literature : Ivan S. Turgenev"

"Borrowings in English : The French Connection – II"

11.12.92

"Conjecture and Proof in Mathematics"

"Desert Wildlife – Elegant Antelope Nilgai"

"Mental Illness – Reaching the Unreached-II"

12.12.92

"Raman, the Inspirer"

"Equestrian Sports – Tent Pegging"

"The Art of Ikat"

"Week Ahead"

13.12.92

No Telecast

14.12.92

"Fractal Structure of a Diffusion Front"

"Basics of Dairy Farming",

"Towards a Bright Future : The Economy – II"

Sports News

The Will to Fight

Modern Olympic Competitions are more than 'War like situations' in many ways, posing high degree of anxiety and paralysing tension. In this regard, therefore, more important than physical fitness and tactical perfection is the psychological conditioning of sportsmen so as to generate in them the 'will to fight'. The most important factor which influences sports performance during highly intense situations seems to be the level of anxiety; whereas too high levels of anxiety are crippling, very low levels of anxiety retard the growth and performance of an athlete. Sportspersons within 'middle range' of anxiety represent essentially 'superior athletes' who are more stable and possess greater resistance to emotional stress.

These observations were made by Dr Gurdip Singh, Director, Physical Education, Shri Guru Gobind Singh College of Commerce (University of Delhi) in his paper "Psychological Effect of Competition of Indian Hockey Players at International Level", presented at the Olympic Scientific Congress, 1992 held at Malaga, Spain.

The paper was based on an empirical study of 32 top level Indian Hockey Players who were administered Martens' Sports Competition Anxiety Test for the measurement of competitive anxiety. Implications of this investigation were discussed alongwith techniques to control high levels of anxiety to 'moderate levels' to suit playing conditions.

News from Abroad

Quality Assessment for Australian Universities

The Australian Government has announced quality assessments for its universities in the country. Under the plans, Australia's 35 universities' efforts to improve standards will be reviewed. Those considered to be doing well will be rewarded with grants totalling Aus$80 million (£36.5 million) a year.

Peter Baldwin, minister for higher education, announced the details in a report which called for the establishment of a national committee to monitor university standards and recommend which institutions should receive the grant allocations.

Universities will be assessed on their performance in certain cases, including management practice, composition of the student population and the competency of graduates.

The national committee will include representatives from the Australian Vice-Chancellors' Committee, academic organisations, students and business groups, and two members of the higher education council.

For universities prepared to participate, the committee is expected to make visits and carry out asssessments of university programmes. The committee will allocate grants to those universities which have developed policies and procedures that have "demonstrably enhanced quality". It will regularly assess the methods used by institutions to evaluate quality and advise the government on their effect and whether other procedures should be adopted.

Early Detection of Genetic Diseases

Scientists at the Queensland University of Technology (QUT) have developed a technique which will fast-track the early detection of genetic diseases, including some cancers.

The process, known as the Geneco technology, was developed in the university's Centre for Molecular Bio-technology under the direction of Associate Professor James Dale, with Dr. Peter Timms and Dr Terry Walsh.

Molecular biologist Dr Walsh gave details of the test at the Australian and New Zealand Association for the Advancement of Science (ANZAAS) annual conference held at QUT in September. He said the test would allow scientists to "read" genetic messages and determine whether a parent has the potential to pass on a genetic disease to his or her children.

The test could be applied to most inheritable diseases. Its application would expand each time the operative gene of a genetic disease was recognised.

A campaign to market the procedure worldwide is under way and the technology is undergoing patent examination in the United States.

The researchers used the disease cystic fibrosis as a model for their test using human hair to determine whether parents could pass the disease on to their children. Cystic fibrosis affects the lung and digestive system and until recently child victims rarely lived long. Genetic diseases are caused by an irregularity of the genetic structure of chromosomes.

The process works on the basis of first recognising the DNA "instructions" stored in the nuclei of human body cells. The instructions, written in the chemical DNA, are called genes.

Using the Geneco technology, scientists can simply and quickly learn whether the instructions have been altered or have mutated.

New developments in the team's research are the formulation of a multiple-testing component and non-radioactive measurement.

Multi-testing raises the possibility of large-scale screening of people with potential genetic disorders. The development of an enzyme-driven detection system instead of radioactive labels makes the technology safer for use by laboratory personnel and more adaptable to automation.

The speed of the new test would help researchers in their search for cures for genetic diseases by allowing them to test large numbers of genetic mutations within hours.

More than 100 papers were presented by scientists from Australia and overseas at the ANZAAS conference and the topics included invitro fertilisation, surrogacy, embryo experimentation, men and anorexia, nuclear waste disposal, food purity, air pollution, and computer crime and hacking.

EPIDOC - A New Bibliographical Database

The IIEP Documentation Centre, Paris possesses one of the richest book stocks on educational planning and related areas specifically devoted to and for developing countries.

The Centre has more than 36,000 books and documents and nearly 600 collections of periodicals which are openly accessible to users. The subjects for documentation include social and economic development plans; complete collections of statistical year books and reports; the documents and conclusions of all main conferences organized throughout the world on educational and training problems; national documents on orientations, priorities and innovations of education systems; copies of theses, reports, studies prepared by institutes, universities, international and non-governmental organizations; collections of periodicals in English, French and Spanish dealing with education, training and development.

Information on basic education in China, student loans in Latin America, or looking for enrolment rates in Togo, all these can be found at IEP Documentation Centre.

Since 1991 the Centre has devoted all its energy to computerizing its new acquisitions, and constituting a database (EPIDOC) which provides access to the upto-date documentation. EPIDOC contains references of 2,500 works, documents or periodical articles.

The EPIDOC database operates under the UNESCO CDS/ISIS microcomputer software.

Indira Gandhi National Open University

Schedule of Telecast for the period 1 December to 30 December, 1992

6.30 AM to 7.00 AM

Date/Day	Academic Programme	Title
2.12.92 Wednesday	Certificate in Food and Nutrition	Vriddhavastha mein poshan
4.12.92 Friday	Management	Managerial Challenges in the 90's – II
7.12.92 Monday	Bachelor's Degree Programme	Parmanu ki Sanrachna – Aitihasik Paridrishya
9.12.92 Wednesday	Rural Development	Rural Cooperatives
11.12.92 Friday	Management	Turnaround Strategy – Back from the Brink
14.12.92 Monday	Bachelor's Degree Programme	Upanyas – III
16.12.92 Wednesday	Computers in Office Management	1. Phased Modernisation of an Office – III 2. Open Channel
18.12.92 Friday	Management	Institutional Infrastructure for Export Promotion
21.12.92 Monday	Bachelor's Degree Programme	Appearing for an Interview
23.12.92 Wednesday	Rural Development	Gramin Sehkarita
25.12.92 Friday	Management	International Business Environment
28.12.92 Monday	Bachelor's Degree Programme	Kabir aur Nirgun Bhakti Kavya
30.12.92 Wednesday	Rural Development	Voluntary Efforts

Book Review

Human Resource Management

G. P. Rao*

Michael Armstrong. A Handbook of Human Resource Management. New Delhi, Aditya Books, 1992. Pp. 254, Rs. 295.

Management as a discipline and profession is still in its infancy in terms of evolving and coming out of theories and principles with reasonable application and applicability transcending the barriers of time and space. The main reason for this – as also a major characteristic of management – is that management is essentially situational: The policies, principles and procedures of managing the different elements in an organisation are to be specific to the place and time within which such efforts are made. The aspect of situationality has greater relevance with reference to the management of human beings – because of the fact that human beings as individuals, members of small groups, and as members of community, or, a nation, possess varied and divergent, and more often than not contradictory, elements within and between the different entities viz., individual, group, and society. Management of human resources thus is the most important, but at the same time most difficult, sphere of activity – as a discipline and also as a profession.

It is in such a context of rather impenetrability of human mind and action in work situations that a literary effort such as the one under review is to be considered. Michael Armstrong, a practitioner, comes out with a crisp *Handbook on Human Resource Management.* This book examines that concept and theories of successful human resource management, and describes the processes that produce the best results from people. Specifically, the book analyses the human resources in terms of organisation, planning, systems, development, relationships, and utilisation – each aspect being covered as a specific part. As indicated, basic strength of the book is its lucidity, organisation, and impact.

The first Chapter seeks to explain what human resource management is about. According to the author, human resource management (HRM) is "an approach to the management of people", based on four fundamental principles: (1) First, that effective management of human resources is the key to the success of an organisation; (2) second, that this success is most likely to be achieved if the personnel policies and procedures are closely related to the achievement of corporate objectives, and strategic plans; (3) third, that the Corporate culture and the values, organisational climate and managerial behaviour that emanate from that culture will exert a major influence on the achievement of excellence; and (4) finally, that HRM is concerned with integration: Getting all the members of the organisation involved and working together with a sense of common purpose.

The Chapter then identifies the five HRM programmes, viz., Organisation, Planning, Systems, Development, and Relationships. Each programme is dealt with as a specific part.

The first part on human resource organisation contains six chapters, and centers round the achievement of the fundamental objective of human resource organisation of ensuring that every aspect of the organisation, employment, motivation, and management of people is integrated with the strategic objectives of the business and contribute to the successful achievement of those objectives.

The second part (Chapter 8) deals with human resource planning which is expected to ensure that the organisation knows and gets what it wants in the way of the people needed to run the business now and in the future.

The third part (Chapters 9 -12) is on human resource systems which revolves round the five main 'people programmes', viz., Recruitment Management; Performance Management; Reward Management; Career Management; and Health and Safety Management.

The fourth part (Chapter 13) is on human resource development and deals with training and developing people.

Part-5 is entitled human resource relationships; and, such relationships are analysed at two levels viz., individual and collective (Chapters 14 and 15).

The sixth and final part is on human resource utilisation which is treated as culminating point in the range of HRM programmes which an organisation needs to achieve its objective of increased growth and prosperity in the private sector and better levels and service and efficiency in the public sector (Chapter 16).

The value of the book would have been enhanced if (a) specific empirical evidence and/or, industry and national level practices were used for illustrating the given point(s) and, (b) short case studies and exercises were appended to each chapter for the purpose of enabling the reader to have self feedback and further analysis of the issues covered in the given chapter.

The book is highly commended for the students of management at postgraduate level and practitioners in Personnel Administration.

** Professor and Head, Department of Management Studies, Madurai Kamaraj University, Palkalai Nagar, Madurai-625 021.*

CLASSIFIED ADVERTISEMENTS

ALL INDIA INSTITUTE OF MEDICAL SCIENCES

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Advertisement No. 6/92

Applications will be received by the Director, All India Institute of Medical Sciences, Ansari Nagar, New Delhi-29 from Indian citizens upto the **24th December, 1992** for the following temporary posts:-

1. PROFESSOR : TEN

One post each for (1) Histocompatibility & Immunogenetics (2) Obstetrics & Gynaecology (3) Ophthalmology (4) Cardiology (5) Orthopaedics (6) Gastroenterology (7) Haematology (8) Anatomy (9) Neuro-Anaesthesia and (10) Nuclear Medicine.

PAY SCALE

Rs. 5900-200-7300-+NPA for medically qualified candidates only.

NOTE : 1. The post of Professor of Ophthalmology is for Dr. Rajendra Prasad Centre for Ophthalmic Sciences.

2. The post of Professor of Cardiology is for Cardio-Thoracic Centre.

3. The post of Professor of Neuro-Anaesthesia is for Neuro-Sciences Centre.

4. For post of Professor of Anatomy and Professor of Histocompatibility & Immunogenetics both medical and non-medial candidates will be considered.

5. The interview for the posts of Professor of Cardiology, Orthopaedics, Gastroenterology, Haematology and Anatomy will be held after the approval of the Government of India is received for creation of these posts.

2. ASSISTANT PROFESSOR : THREE

One post each for (1) Tissue & Organ Culture (Biochemistry) (2) Biophysics and (3) Paediatrics.

PAY SCALE

Rs. 3500-125-4500+NPA for medically qualified candidates only.

RESERVATIONS

One post is reserved for Scheduled Caste candidate.

UPPER AGE LIMIT

50 years, relaxable for Government Servants, Scheduled Castes and Scheduled Tribes candidates or otherwise exceptionally qualified candidates. Upper age limit upto 5 years is relaxable in the case of Scheduled Castes and Scheduled Tribes candidates.

NOTE : 1. The post of Assistant Professor of Tissue & Organ Culture is for the Department of Biochemistry.

2. For the post of Assistant Professor of Tissue & Organ Culture and Biophysics, both medical and non-medical candidates will be considered.

3. The Scheduled Castes and Scheduled Tribes candidates can apply for any of the posts of Assistant Professor in the concerned discipline/Subject. Against the reserved quota, the Scheduled Castes/Scheduled Tribes candidates will be considered first. In case the Scheduled Castes/Scheduled Tribes candidates are not found up to the mark to hold the post of Asstt. Prof., the post will be filled from against the general category candidates if recommended by the Selection Committee for appointment.

4. The effective date upto which the requisite experience must be completed, will be 30th June, 1993.

5. In case of Scheduled Castes and Scheduled Tribes candidates, the length of experience prescribed for the post of Assistant Professors are relaxable at the discretion of the Selecting Authority.

6. Scheduled Castes and Scheduled Tribes candidates called for interview will be paid travelling allowances as per rules of the Institute.

N.B. 1. All posts carry usual allowances as admissible to Central Government Servants of similar status stationed at Delhi/New Delhi.

2. The essential qualifications are relaxable at the discretion of Selecting Authority.

3. While every effort will be made to provide residential accommodation to the faculty staff appointed at the institute subject to availability but in view of the paucity of the residential accommodation in the campus it may not be possible to provide accommodation in every case. In the event that no accommodation is provided necessary HRA as admissible to Central Government Servants of similar status stationed at Delhi/New Delhi will be provided.

Application form and other information can be obtained personally or on written request accompanied by a self addressed stamped (Rs. 3/-) envelope (23x8 cm) from the office of the Sr. Administrative Officer, Administrative Block, AIIMS, New Delhi-29.

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University News

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NASHIK-422 005

Openings for Administrators and Professionals

Applications are invited from Indian citizens possessing the requisite qualifications and experience for filling in the following posts in the pay scales shown against each *plus* allowances as admissible under the university rules.

1. REGISTRAR (1 POST) (Tenure Post)

Pay Scale : Rs. 4500-150-5700-200-7300

Qualifications and Experience

(a) A Ph. D. degree with a second class Master's degree in any discipline OR I.A.S. or equivalent qualifications.
(b) At least 10-15 years' experience in teaching/research/administration/educational planning and management/accounts management at senior level.
(c) Age limit : 45 years for General Category candidates and 50 years for Reserved Category candidates.

2. DEPUTY REGISTRAR (3 POSTS)

Pay Scale: Rs. 3200-100-3500-125-4625

Qualifications and Experience

(a) Master's degree in any area with at least 55% of marks.
(b) 10 years' experience in the field of educational administration out of which 5 years shall be in a responsible capacity.
(c) Age limit: 40 years for General Category candidates and 45 years for Reserved Category candidates.

3. ASSISTANT REGISTRAR (2 POSTS)

Pay Scale: Rs. 2200-75-2800-100-4000

Qualifications and Experience

(a) Master's degree in any area with at least 55% of marks or equivalent grade. OR
(b) A bachelor degree from a recognized university with at least second class and pass at final examination of Institute of Chartered Accountants/Cost and Works Accounts/Company Secretary or any equivalent examination.
(c) 5 years' experience in the field of office administration in supervisory capacity.
(d) Age limit: 35 years for General Category candidates and 40 years for Reserved Category candidates.

4. PRINT PRODUCTION SUPERVISOR (1 POST)

Pay Scale: Rs. 2200-75-2800-100-4000

Qualifications and Experience

(a) Postgraduate degree in any discipline of any recognized university.
(b) Govt. Diploma in Printing Technology.
(c) 5 years' experience in book/non-book publishing organisation and in editorial department at supervisory level. Candidate should know the latest printing technology. OR
(a) A degree in any discipline of any recognised university.
(b) Govt. Diploma in Printing Technology.
(c) 10 years' experience of the same kind as mentioned at (c) earlier. OR
(a) A degree in any discipline of any recognised university.
(b) Diploma or Certificate in Printing Technology.
(c) 15 years' experience of the same kind as mentioned at (c) earlier.

Desirable Qualifications

(i) Experience in editorial department of a book publishing organisation.
(ii) Knowledge of computerised typesetting (DTP).
(d) Age limit: 35 years for General Category candidates and 40 years for Reserved Category candidates.

For the post of Registrar, candidates belonging to SC, ST, DTNT/VJNT are also eligible to apply. For such candidates, the caste certificate from the taluka magistrate is a must. Out of 5 posts of Dy. Registrar and Assistant Registrar, 3 posts are reserved, i.e., 1 for SC, 1 for ST and 1 for DTNT/VJNT exclusively.

GENERAL CONDITIONS

(a) Candidates should know computerisation and mechanisation in the administrative/educational programmes.
(b) The University reserves the right to :(i) relax any of the requirements with reference to age, qualifications and experience; (ii) post the selected candidates either at the headquarters at Nashik or at any of its Regional Centres located in the State of Maharashtra.
(c) Since applications received may be shortlisted, merely possessing the prescribed qualifications and requisite experience would not entitle a person to being called for an interview.
(d) No correspondence regarding issue of call letters for interview or regarding selection of candidates for a post will be entertained at any stage.
(e) Separate applications are necessary for separate posts.
(f) The last date for receiving competed applications is **15th Dec. 1992.**

HOW TO APPLY

For application form, please write to the Registrar, Yashwantrao Chavan Maharashtra Open University, College Road, Nashik: 422005 with an I.P.O. for Rs. 25 (Rs. 20 for Reserved Category candidates) in the name of 'Finance Officer, Y.C.M.O.U., Nashik' on or before 7th Dec. 1992.

PR/Admn/5-10.11.92.

REGISTRAR

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University News

MONDAY, DECEMBER 7, 1992

Rs. 5.00

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Editor :
SUTINDER SINGH

S. P. Y. R. J.

Learning-Teaching Cognitive Paradigms in Knowledge Organisation

Mamota Das *

India has reached a stage in its economic and technical development when a major effort must be made to derive the maximum benefit from the assets already created and to ensure that the fruits of change reach all sections. Education is the highway to that goal. In our national perception education is essentially for all. This is fundamental to our all round development, material and spiritual.

An educational programme, like any other activity, is organized around certain expectations which could be enunciated at various levels of specificity like goals, aims, objectives or specifications. One of the sources of educational objectives is the nature of existing knowledge. Existing store of human knowledge is the most basic characteristic of a growing civilization. Education as a means of extending civilization should help in furthering growth and use of knowledge as its own categories such as facts, processes, basic ideas, concepts, thought system. Its classification and organization into recognized systems are known as disciplines or subjects of study. Hence it can also be called the disciplinary source. Existing store of human knowledge is one of the main considerations in formulating objectives. A number of models of classification of objectives have since been developed. The cognitive taxonomy by Bloom (1956), Englehart, Hill (1963), Affective taxonomy of Krathwohl, Bloom, Masain (1968) and Psychomotor taxonomies of Simpon (1966), Harrow (1972), Experiential taxonomy of Steinaken N.W. and Bell R.M. (1975).

The most convincing of these in the recent years has been the taxonomical model of educational objectives developed by Bloom and his associates. It has adopted a tripartite division corresponding to the three primary aspects of individual growth – cognitive, affective, psychomotor, (knowing; feeling and doing).

Bloom (1956) classifies the uses of knowledge and the development of intellectual skills into six categories arranged from the most simple (knowledge) to the most complex (evaluation) functions.

There is a tight connection between learning and teaching and there is no point in teaching without learning. The cognitive view is that learners are not passive during learning, but that learning is an active, constructive, and purposive process dependent on the mental activities of the student. Changing conditions in our educational system have given rise to popularity of cognitive theory.

Schema Theory

Schema Theory is a useful approach to cognitive learning. According to this theory, the organized, structured, and abstract bodies of information (or schemata) that a learner brings to bear in learning new content determine how the learning task is interpreted and what the learner understands and acquires from the study. Schemata are the concepts, beliefs, expectations, and processes – virtually everything from past experience – that are used in making sense of things and actions. They represent knowledge at all levels of generalizations. A Schema is broader than a concept because it embodies relationships between concepts (world knowledge) as well as definitional knowledge that is, a schema is embeded within schemata. According to Rumelhart and Norman, learning implies a change in Schemata. These theorists propose that such change occurs in three ways: accretion, fine tuning, and restructuring.

(Contd. on page 10)

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An Experiment to Test Effectiveness of Three Instructional Strategies for Higher Education

Anupama Shah*

Sushmita Mandal**

Introduction

Education refers to any act or experience that has a formative effect on personality. It is an indisputable fact that education is very important for the development of an individual, a society and a country. It is a process which involves planned efforts for human development. Communication is an act by which people share knowledge, ideas, feelings and information to gain common understanding of the meaning and the use of message. It occurs through speech and other senses like audio, visual, touch, smell and taste.

Formal education requires communication between the teachers and the students. It is transfer meaning by using symbols, like spoken and written words and gestures. The success of teaching-learning process depends upon the interest it arouses in the students. The use of teaching aids in an effective way not only absorbs and holds the attention but may also help some more learning to take place. Teaching aids arouse curiosity, retain interest and promote participation in the learners. They help to overcome language barrier, supply a concrete basis for conceptual thinking and hence reduce meaningless word responses of the students. They offer a reality of experiences which stimulate self activity on the part of the students. They contribute to longer retention of learning and make it more permanent. They bring the tangible real life situations into the classroom, provide experience not easily obtained and contribute to efficiency, depth and variety of learning. With the development of technology, the teaching-learning process is improved by using a variety of methods with a variety of aids. These can be termed as instructional strategies.

Lecturing is one of the most widely used and age old method of teaching and learning. It is one-way process of communication where teacher is the authority. It can provide most up-to-date information since, the teacher can modify the lecture even while delivering it. It is less expensive method of teaching because a lesson can be covered in a limited time and one teacher can teach a large number of students. Demonstration can be an improvement over just verbal symbols. It is a visualised explanation of an important fact or idea or process. It involves students in the process of communication. It removes blocks in the mind of the students in understanding the process. Language barrier can be overcome and rapport can be established between the teacher and the students.

Written material in the form of booklet can transfer information to a large number of people at a time, but the limitation is, the person should be able to read and understand. It is the responsibility of the writer and the editor to take care of the printed material in preparing them for disseminating knowledge at the level of understanding of the target group. Printed materials permit the readers to select their content and to react spontaneously to them by making some comments or understanding. They can be used for independent study as they can be produced in multiple copies. A reader can take her own time in completion, and can stop, put away the material and return later to the point of termination. Printed materials can tolerate delays and facilitate the study of difficult complicated matter.

With the progress in the field of communication new technologies are coming up. Video is one such communication technology which has potential to reach individuals and play catalytic role in human minds. It has potential to educate, inform, entertain and make lasting picture on learners' mind.

All the three instructional strategies namely lecture cum live demonstration, video film and booklet have proved effective in some teaching-learning situations. More experiments involving new contents at different levels of education will further strengthen the findings regarding effectiveness of the three instructional strategies in relation to those factors which may be associated with the students' learning. So, a study was taken up in the year 1991-92 with Home Science College students.

Objectives

1. To study the effectiveness of the three instructional strategies (lecture cum live demonstration, video film and booklet) in teaching selected aspects of puppetry to Home Science students in terms of gain in knowledge and development of ability.
2. To study the significant differences in the effective-

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ness of three instructional strategies in relation to the students' –

a. English language competence,

b. academic achievement, and

c. attitude towards instructional strategy.

Methodology

The first step of the investigation was to select the subject matter on puppetry, which was common for all the three strategies. It was :

- Types of puppets,
- Types of puppet stages,
- Preparation of puppets – especially rod and glove puppets,
- Manipulation of puppets – especially rod and glove puppets,
- Accessories used for puppet play.

For measuring gain in knowledge all the above topics were considered, but for development of ability only the glove puppet was to be prepared by the students.

A battery of tools was used by the researchers to collect information as shown below :

Purpose	*Tool*
1. English language competence	Questionnaire cum checklist with structured items
2. Attitude towards instructional strategy	Attitude scale with two points response system (Agree and Disagree)
3. Academic achievement	Office records
4. Development of ability	Rating scale with three points response system (very good, good and poor).
5. Gain in knowledge	Test on puppetry – True and False – Correcting underlined false words – Fill in the blanks – Illustrations – Short answers

Sample of the study consisted of 177 students from the First year B.Sc., Faculty of Home Science, M.S.University, Baroda, 1991-92. They were distributed as follows :

E_1 Experimental group exposed to lecture cum live demonstrations – 57

E_2 Experimental group exposed to video film— 55

E_3 Experimental group exposed to booklet – 65

For data collection, the sections and groups formed by the Faculty Office were taken as such. Each group of each section was exposed to the strategy separately.

Scoring and Categorization

The procedure used for giving weightage to various items was as follows :

Variables	*Categorization*	*Scores*	*A student could get Minimum marks*	*could get Maximum marks*
1. English language competence (items were given the scores varying from 0 to 14)	Good	above 29	59	0
	Poor	29 and below		
2. Attitude towards instructional strategy (Scoring was done for every item :	Favourable	11 - 20	20	0
	Unfavourable	0 - 10		
3. Academic achievement	High	60% to 70% (Ist division)		
	Low	50% to 59% (IInd division)		

Nature of item	*Agree*	*Disagree*
Positive (9)	1	0
Disagree (11)	0	1

Test	*Scoring*
Knowledge test	Every correct response was given a score of 1/2 to 2 according to the weightage attached to the question. The maximum and minimum marks a student could receive were 48 and 0 respectively.
Ability test	3, 2 and 1 scores were given to the items of the three points rating scale, used. Maximum and minimum marks a student could get were 33 and 11 respectively.

Statistical analysis used were percentage, students' t-test, F-test and paired t-test.

Major Findings

Background Information

1. Overall the respondents were almost equally divided into two groups of poor and good English language competence. Somewhat higher percentage of the respondents from E_1 and E_2 groups had good English language competence, whereas, it was reversed in case of E_3 group.
2. Overall little above 50 per cent of the respondents were low achievers. Somewhat high percentage of the respondents from E_2 and E_3 groups were low achievers as compared to the high achievers, whereas it was reversed in case of E_1 group.
3. Majority of the respondents from E_1 and E_2 groups had favourable attitude towards the strategy they were exposed to, while little more than 50 per cent of the respondents of E_3 group had unfavourable attitude towards the strategy.

Significant differences in the gain scores and the instructional strategy.

1. Significant differences were found in the pre-test and post-test scores at .01 level indicating gain in knowledge regarding puppetry in each of the three experimental groups. This shows that there was considerable gain in knowledge in the respondents of all the three experimental groups.
2. Significant differences were found at .01 level in the means of gain scores indicating gain in knowledge regarding puppetry among E_1 and E_3 groups and E_2 and E_3 groups while no significant was found among E_1 and E_2 groups. The gain in knowledge was more in E_1 and E_2 as compared to that of E_3 group.
3. Significant differences were found at .01 level in the pre-and post-treatment mean scores indicating development of ability to prepare a glove puppet in all the three experimental groups. There was considerable development of ability in all the three experimental groups.
4. Significant differences were found at .05 level and at .01 level in the mean of gain scores indicating development of ability among E_1 and E_2 and among E_2 and E_3 respectively. While no significant difference was found among E_1 and E_3 groups. Development of ability in E_2 group was more than E_1 and E_3.

Significant differences in the gain in knowledge and development of ability in relation to the variables.

Significant differences were found in the means of gain scores as shown below :

Groups Compared 1	*Respondents of Experimental Group who Gained More* 2	*Respondents of Experimental Group who Gained Less* 3	*Level* 4
1. **English language competence (ELC).**			
A. *Gain in Knowledge*			
i. among E_1 and E_3 groups	E_1 Good ELC	E_3 Good ELC	.01
ii. among E_2 and E_3 groups	E_2 Good ELC	E_3 Good LEC	.01
iii. among groups of good and poor ELC of E_1	E_1 Good ELC	E_1 Poor ELC	.01
iv. among groups of good and poor ELC of E_2	E_2 Good ELC	E_2 Poor ELC	.01
v. among groups of good and poor ELC of E_3	E_3 Poor ELC	E_3 Good ELC	.01
B. *Development of Ability*			
vi. among E_2 and E_3 groups	E_2 Good ELC	E_3 Good ELC	.01
vii. among groups of good and poor ELC of E_1	E_1 Good ELC	E_1 Poor ELC	.05
viii among groups of good and poor ELc of E_2	E_2 Good ELC	E_2 Poor ELC	.01
2. **Academic Achievement**			
A. *Gain in Knowledge*			
i. among E_1 and E3 groups	E_1 Low achievers	E_3 Low achievers	.01

1	2	3	4
ii. among E_2 and E_3 groups	E_2 Low achievers	E_3 Low achievers	.01
iii. among E_2 and E_3 Groups	E_2 High achievers	E_3 High achievers	.05
iv. among E_1 and E_3 groups	E_1 High achievers	E_3 High achievers	.01
v. among high and low achievers of E_3	E_3 High achievers	E_3 Low achievers	.05
B. *Development of Ability*			
vi. among E_2 and E_3 groups	E_2 Low achievers	E_3 Low achievers	.01
vii. among high and low achievers of E_3	E_3 High achievers	E_3 Low achievers	.05
3. **Attitude Towards Instructional Strategies**			
A. *Gain in Knowledge*			
i. among E_1 and E_3 groups	E_1 Favourable attitude holders	E_3 Favourable attitude holders	.01
ii. among E_2 and E_3 groups	E_2 Favourable attitude holders	E_3 Favourable attitude holders	.01
iii. among favourable and unfavourable attitude holders of E_1	E_1 Favourable attitude holders	E_1 Unfavourable attitude holders	.01
iv. among favourable and unfavourable attitude holders of E_3	E_3 Unfavourable attitude holders	E_3 Favourable attitude holders	.01
B. *Development of Ability*			
v. among E_1 and E_2 groups	E_2 Unfavourable attitude holders	E_1 Unfavourable attitude holders	.01
vi. among E_2 and E_3 groups	E_2 Unfavourable attitude holders	E_3 Unfavourable attitude holders	.01
vii. among favourable and unfavourable attitude holders of E_1	E_1 Favourable attitude holders	E_1 Unfavourable attitude holders	.05

No significant differences were found among the following in relation to the variables.

A. *Gain in knowledge*

i. Poor ELC among all three experimental groups.

ii. Good ELC among E_1 and E_2 groups.

iii. Low achievers among E_1 and E_2 groups.

iv. High achievers among E_1 and E_2 groups.

v. Among High and Low achievers of E_1 groups.

vi. Among High and Low achievers of E_2 groups.

vii. Unfavourable attitude holders among all three experimental groups.

viii. Favourable attitude holders among E_1 and E_2 groups.

ix. Among unfavourable and favourable attitude holders of E_2 group.

B. *Development of Ability*

i. Poor ELC among all three experimental groups.

ii. Good ELC among E_1 and E_2 groups.

iii. Good ELC among E_1 and E_3 groups.

iv. Among poor and good ELC of E_3 group.

v. High achievers among all three experimental groups.

vi. Low achievers among E_1 and E_2 groups.

vii. Low achievers among E_1 and E_3 groups.

viii. Among high and low achievers of E_1 group.

ix. Among high and low achievers of E_2 group.

x. Favourable attitude holders among all three experimental groups.

xi. Unfavourable attitude holders, among E_1 and E_3.

xii. Among favourable and unfavourable attitude holders of E_2.

xiii. Among favourable and unfavourable attitude holders of E_3.

Discussion

There was significant gain in knowledge as well as development of ability through all the three instructional strategies. This might be because use of teaching aids creates interest among the students and motivates them to learn. Illustrations in booklet clarify the concepts. Demonstration and video film show the actual process in motion. Thus, all the three strategies can hold the attention of the learners and may have helped to score high in the tests. A variety of teaching aids should be made available and teachers should be encouraged to produce and use them.

Video film was found to be best strategy followed by lecture cum live demonstration and booklet. The reasons could be many. Video film has lot of educational value, besides being forceful, flexible and easily available. It is still a novel way to teach through video film. The variety of visuals, sound and music with the lesson must have helped the individual to pay undivided attention and to retain the gained knowledge. Video can bring about an effective teacher in the classroom. Video technology should be made more available to the educational institutions.

Booklet was found to be less effective as compared to the other strategies. It might be because the respondents who were exposed to this instructional strategy were somewhat low achievers having poor English language competence and unfavourable attitude towards their strategy, as compared to the respondents of other experimental groups. The cyclostyled papers with simple illustrations in black and white may have failed to create interest and hold the attention of the respondents. Preparation and use of booklet are easier as compared to the production and use of video film. Video film besides being expensive also has mechanical and technical problems. Yet, video film is recommended when large number of respondents have to be exposed to the same content in smaller groups.

Majority of the respondents had highly positive attitude towards video film. It might be because, as an instructional strategy, video film has the facility in demonstrating certain processes. Takes-retakes can be many to bring perfection. Close-ups of important steps are shown and important points are focussed, which help the students to concentrate on those points. Various strategies can be made more attractive and effective within their framework for example, motion cannot be brought into a booklet but colourful illustrations can make it attractive.

Findings related to English language competence show that the respondents with good English language competence had better scores as compared to their counterparts. It might be because the medium of instruction for all the strategies was English.

Even when English language competence and favourable attitude seemed to be associated with gain in knowledge and development of ability, overall it was found that the academic achievement, which reflects mental ability is the main factor associated.

Conclusion

The study throws light on the use of various instructional strategies to instruct students in higher education especially the use of video film which is novel and interesting. Low academic achievers, and the students with unfavourable attitude and poor English language competence require special attention since their gain in knowledge and development of ability were lower than their counterparts.

References

1. Brown and Atkins. **Effective teaching higher education.** New York, Methuen, 1988. pp 7-17.
2. Butler, R.B. A comparative analysis of three instructional television presentation formats. **Dissertation Abstract International.** 41(6) Dec. 1980. 240 8 -AP.
3. Chandra, Shah and Joshi. **Fundamentals of Teaching Home Science.** New Delhi, Sterling Publishers, 1989. pp.272-273
4. Chahil R. A comparative study of the effectiveness of radio, television and pamphlets in communication of agricultural and family planning information. Dissertation (M.Sc.) – University of Delhi, New Delhi.
5. Gupta, A. To produce a video film on "Puppetry" to instruct the Home Science College students and testing its effectiveness in terms of gain in knowledge. Dissertation (M.Phil.) – M.S. University, Baroda, 1991.
6. Gupta, V. Effectiveness of a selected combination of channels (Projected films, television, demonstration) in communicating on nutrition. Dissertation (M.Sc.) – University of Delhi, New Delhi, 1974.
7. Mehta, V. Effectiveness of a selected combination of communication channels (Films, Photographs, demonstration) in communicating a message on nutrition. Dissertation (M.Sc.) – University of Delhi, New Delhi, 1974.
8. Reddy, K.V. Mass media in education. **University News,** Vol. xxx, No.1, Jan. 6, 1992.
9. Shah, A. and Joshi, U. **Puppetry and education.** M.S.University Baroda. 1990.
10. Shah, B.P. An experimental investigation of the effects of selected teaching strategies on the development of creative thinking and achievement in science. Thesis (Ph.D.) – M.S.University, Baroda, 1981.
11. Singh, U. Effectiveness of media with reference to classroom ethos. Thesis (Ph.D.) – South Gujarat University, Gujarat, 1983.
12. Ziegler, J.H. The effects of interactive video on learning, perceived effectiveness and user attitude in academic library orientation programme, 1990. Dissertation Abstract International. 51(9), March 1991,304 8 A-P.

Writing in the Universities

Biplab K. Mazumdar*

Writing in the Universities is the yardstick of common understanding, a common tradition, common ideas and common ideals. To the youth, the task is overwhelming. Youth is lacking the ties of blood, oriental language and long-established culture of our country.

'Youth is given too much freedom. Youth is interfered with too much. Youth runs wild. Youth cares. Youth has never been taken so seriously. Youth has never deserved it so little'. And so the conflicting platitudes, the easy generalisations mount. Never, says one, have there been so many young people of university; never has India been better educated. Ah, replies another, but what do they get out of university, what do they do with their education? We are becoming a nation of organization men, non-reading, non-thinking; a degree is just a first step to a more comfortable, highly paid and less demanding job.

Here is something concrete to go on, a particular accusation which it should be possible to confirm or deny. 'Non-reading, non-writing, non-thinking ?' Well, do students today read, write and think? If so what do they read (above and beyond the call of duty, naturally), what sort of thing do they write, and what ideas do they have to express in writing and conservation? The only way to find out is to go and ask, to talk to students and their teachers, to get hold of and to read their magazines.

Why pick on the universities? The reasons are in the main purely practical. If one were looking only for young writers who have already achieved something of more than merely ephemeral interest it would be enough to take the national magazines.

Why should by rights be found in the less keenly competitive atmosphere of a university magazine is because the average articulate person who feels he or she has something to say, says it and get a hearing for it, without undue difficulty. Occasional exceptional writers there will be, but these come to the earnest inquirer as a sort of bonus for working his way through so much which is not, judged by ordinary literary standards, remarkably worth-reading. Many of the writers now being published in the university magazines may well not be writers by vocation; they may never publish or even write anything again when they leave university. But what they are writing now, if not by any stretch of the imagination 'literature', still means something to them, and can still convey something to the reader, if not always quite what the another intended.

From this point what we find begins to reflect back on the assertions first quoted. Does youth get too much attention now-a-days or too little? For the student writer this is likely to be a crucial question. Quite practically, the university he is attending will have, if necessary, rights of complete veto on any student publication, which it may exercise from time to time on a particular piece, a particular magazine or, in extreme cases, on students writing generally. At the other extreme, it may well be willing to subsidize at least one semi-official magazine; magazines being, after all, status symbols in the new university (to put the motives for such direct assistance).

Beyond these tangible matters of permission or rejection, financial assistance or no financial assistance, there are the less clearly defined but possibly more far-reaching question of attitude. How do dons feel about student writing? What, if anything, do they think they should do personally to encourage it? In most of the Indian universities, it has always been felt to some extent – and no doubt at least a few dieherds still feel it – that writing – like acting and debating – if a little below rowing, is a hobby all very well in its place, provided only that it does not get in the way of a man's getting a good degree. It is a view which has much to be said for it; certainly its application does not seem to have done irreparable harm to the many generations of English writers who fell under its influence.

But, the answer would come, and perhaps does come in the newer-universities more often than in the older ones; in the past students would nearly all have been brought up in cultural homes where reading and writing were accepted among the normal accomplishments of life; now many students come from homes where a book is a rarity and any cultural interest whatever positively frowned upon. How will they get on if we do not heed them, encourage them, make them feel that creative writing is nothing anyone need be ashamed of? If they are not encouraged, perhaps they will remain for ever Miltons all to mute again and inglorious.

Again how far do the universities differ from each other in the quality and volume of their literary output? Are the newer universities proportionately less active

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than the older ones or for that matter is the work they produce necessarily of a lower standard? Are there recognizable regional characteristics in student writing? What commercial considerations apply; how are student magazines financed and what sort of circulation do they achieve?

It is in fact the absence of tough criticism and insistence on standards that bedevils just writing and has to meet the same. Standards of excellence; all that the university can do is to insist on the importance and the value of the writer's role in general. But once again this needs doing in a special way. There is, I think, a danger, in these days of fashionable rebellion of undergraduates' taking up writing not because they want to write but because they like the life – they want the privileges and favours of being a writer. It is a style – marcher, writer, beat, it's all the same line of country.

Writers are simply people, to be judged by ordinary human standards, and they have to win respect by working for it, not by waving the right banner or claiming genius.

Writing is just as good a form of protest as any other.

The writer who is already in full control of his talents by the time he is twenty one, or even twenty five, is a sufficiently exceptional being to be left out of most normal calculations.

One the other hand, there is an enormous quality of writing being turned out in universities all over the country, and any number of students magazines, from the glossy and substantial to the flimsiest duplicated sheets, in which young writers can achieve a hearing. Almost every university has at least one literary magazine and one student newspaper; many also have a proliferation of other magazines with special interests (politics, poetry, cinema, religion, photo-reporting). Perhaps after all this is a field where activity and opportunity are the first considerations, and the end product can for the time being be left to look after itself. If so, then the time to judge the writers now in print at the universities will be in five or ten years; for the present all that matters is the fact that they are writing and reaching some sort of public.

The greatest danger to the young writer at university today is not discouragement and the unconcern of his elders but too much encouragement and the excessive importance attached to his writing. It would be quite wrong to suggest that university staffs ought to give up taking any interest in the literary efforts of their pupils; and it is admittedly hard to draw an exact line between practical assistance, financial and otherwise, and possibly harmful interference. But it does seem that a rather less reverential approach might help criticism, may do harm to some people, but absence of criticism does harm to many more, especially when they emerge into a harsh outer world at the end of their three or four years at university, and find that drastic adjustments are necessary.

Finally, what can be guessed from the student writing of today about the tastes and the interests, the inclinations and prejudices, of the next generation? Perhaps we cannot fairly deduce anything; so much is a gamble. It is a gamble that the writing which appears in print represents a fair cross section of talent and opinion. It is a gamble that the investigator takes to the right people on the spot who will give him a balanced view of the situation, or better, the right selection of biased opinionated people whose conflicting views will help him to achieve a balance of his own. What interpretation he puts on the facts before him, others will in all probability see them in a quite different light and come to quite different conclusion.

We have tried to allow the facts to speak for themselves as far as possible and perhaps the only answer for anyone interested is to follow the pointers given, acquire as many of the magazines as he can, and make up his own mind.

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SPORTS MANAGEMENT

Sundaram Srivatsan*

Introduction

Sports are understood more by experience than by making any empirical analysis of the activity. An understanding of sport will assist in the formation of 'policy development' essential for 'management considerations'. "The essence of sport is found in the game of sport" (*Weiss* 1969). The stress on 'Game' has implications for management of sports activities in educational institutions. Proper training and competent coaching are two ingredients of 'Sports Management'. From a management perspective planning is done on the concepts of Organising, Directing and Controlling of sports activities. In this onerous task of sports management are involved, a) Pursuit of Excellence, b) Focus on the individual, c) Importance of activity, d) Proper training, e) Competent coaching, f) Records, and g) Standardisation.

The joy of sports (*Michael Novak* – 1976) includes certain areas which deserve proper management – such as, a) Women and sport, b) Sport in relation to politics and morality, c) Regionalism and sport, d) Media and sport, e) Money and sport. There can be a splendid model related to Sports Management considering the above factors. In other words theoretical basis of sports are to be linked to the practical management of sports. (*Edwin Cady* – 1978).

Nature of Management

Sports are to be experienced. The best way to know about management is to get involved in it. "Management is analysed by considering the functional activities that constitute the management process" (*Vanderzwaag* – 1984). The following are the commonly know functions of management:

1. Planning, 2. Organising, 3. Staffing, 4. Directing, 5. Controlling, 6. Evaluating, 7. Communicating, 8. Decision making, and 9. Budgeting.

1. *Planning*

Means to decide on the course of action. Goals to be achieved. Management indicates what needs to be accomplished. The bulk of planning activity will centre round the 'Programme', 'Budget' and 'Procedures'. Planning is a continuous process. It does not stop when organisation is launched. Planning is the beginning of management in action. Planning begins with "Forecasting" and ends with "Policy Development".

2. *Organising*

A part of planning. But implementation and action are involved. Organisational structure (Line of Authrity) helps to point out liaison, leading to coordination which is an important function of Directing. Organising includes "position descriptions" and the authority that goes with each position.

3. *Staffing*

Effective recruitment and selection of personnel. It also includes orientation, training, and development of staff. Choosing of 'competent people' in the staff. Orientation is making staff familiar with what is to be done – training and orientation are interrelated. Development of staff involves, a) Knowledge, b) Attitudes, and c) Skills. Development offers the 'Potential to Advance' beyond the current status.

4. *Directing*

Management in action. Directing begins with the process of delegation of duties – responsibilities. 'Accountability' is always with delegation of 'authority'. Need for coordination points to another dimension of directing – A real challenge in management. Management of differences among members in organisation is a part of directing. Motivation – as an aspect of directing is very important. Motivation is one of the significant aspects of management.

5. *Controlling*

A technique followed in realising targets set, following a plan of organisation. In controlling managerial situation several aspects are involved. Mostly, chronologioal, these aspects involve continuous nature of events. A reporting system is basic under controlling to supply the needed data. The development of performance standard is a function of control system. This leads to evaluation and evaluation is one of the principal functions of management.

6. *Evaluation*

Direct action in comparing performance standards with the results that are seen in the individual and programme reports for the year. It may also include performance standards, reporting system and actual assessment. Main objectives of evaluation are a) To improve individual performance, b) To coordinate programme development, c) To have a basis for external criticism, d) To stimulate individual development, e) To fulfil need involving status, and f) To determine appropriate personnel actions.

7. *Communicating*

Basically it involves bringing groups into common action. Communication occurs in various ways. Five

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factors are involved in group communication.

i) Nature of task (simple/complex)
ii) Conjunctive/Disjunctive efforts
iii) Routine work/Novel programme
iv) Is there group control or out of control
v) Task involves information processing or needs action.

(Stech and Ratliffe - 1976)

8. *Decision Making*

In a general sense this involves selection from among several alternative courses of action (*Prasad*-1982)-process of selecting and aim is to select the best alternative. Types of decisions: i) Organisational/personal, ii) Routine or strategic, iii) Policy and operative, iv) Programmed/Non programmed, v) Individual/Group Decision. Decision making has to follow a process – problem, diagnosis, analysis, search for alternatives, evaluation of alternatives, comparison of alternatives, selections of alternatives, experience, experimentation, research and analysis, putting decisions into action.

9. *Budgeting*

In effective planing the search is always for budget which is a good starting point for basic management. It is a reflection of everything in total planning process. Budget planning includes three basic steps – a) Analysis of resources, b) Procedures for budgetary control, and c) Presentation of the budget – 'Management', d) Objective (MBO) will be the technique in dealing with budgetary steps. Management by Objectives (MBO) represents "participative management – which means all involved in management work within the framework of 'outputs' (results) which accrue from 'inputs' (resources). Budget is always planned and prepared within the desired level of performance. In budget management three important aspects such as i) Resources, ii) Activities, and iii) Results are stressed.

Conclusion

Sports as an enterprise have their own features that mark them as unique human experiences with broad social implications. Sports programmes in educational institutions stress on the need for 'effective management. Parameters of sports and effective management are essentially same at all levels of 'sports management'. Therefore in any kind of management, "It is always a journey and not a destination" (*H.J.Vanderzwaag* – 1984).

References

1. Cady, Edwin H. **The Big Game,** Knoxville (T) USA, Univ. & Tennesse Press, 1978.

2. Novak Michael. **The Joy of Sport.** New York, Basic Books, 1976.

3. Prasad, L.M. **Principles and Practice of Management.** New Delhi, Sultan Chand, 1982.

4. Vanderzwaag. H.J. **Sport Management in Schools and Colleges.** New York, Wiley, 1984.

Learning-Teaching Cognitive Paradigms in Knowledge Organisation

(Contd. from page 1)

Schema theory assumes that what students already know determines what they will learn. The students' prior knowledge (existing schema) interacts with new situations to create psychological meaning, one's background knowledge frames the interpretations made. A schema is a framework of expectations that allows the learner to take what is directly perceivable and to make inferences about the unseen features. The ability to infer what someone means by certain words or actions depends on prior knowledge. Cognitive learning theory stresses the importance of students having knowledge about and control over their approaches to learning.

Schema theory and the view that learning is an active process have given rise to teaching strategies. There are a wide variety of approaches to teaching. The strength in education resides in the intelligent use of this powerful variety of approaches – matching them to different goals and adapting them to the individuals' styles and characteristics. Competence in teaching stems from the capacity to reach out to differing individuals and to create a rich and multidimensional environment for them. Curriculum planners need to design learning centres and curriculum that offer a variety of educational alternatives. Makers of instructional materials need to create more interesting and effective books, films and other learning sources. Most important for the future, our society needs to develop new educational forms – education opportunities. Models of teaching are one basis for the repertoire of alternative approaches that teachers, curriculum makers, and designers of materials can use to help diverse learners reach a variety of goals.

Almost at all levels of education learning and teaching is at the informational level without comprehension, what to talk of application of knowledge and skills. A definite upward shift is required leading to application, analysis, synthesis and evaluation of information. Cognitive flexibility needs to be developed by providing cognitive resources, which shall be helpful in accomplishing a variety of intellectual tasks. This would provide for overall cognitive growth. Thus, education should help us in acquiring knowledge. Deciding to use knowledge for a good purpose is wisdom. Information needs to be digested to become knowledge and knowledge should mature into wisdom.

Fellowship of Spirits

Hon'ble (Dr) J. Jayalalitha, Chief Minister of Tamil Nadu, delivered the Convocation Address at the second convocation of the Tamil Nadu Dr. M. G. R. Medical University, Madras. She said, "The university should be a fellowship of spirits, a society of seekers of truth who believe that there are things in life of vastly greater importance than the mere acquisition of material goods and comfort, necessary though they are in the current context of living. It should help the student to pursue ideals in an objective and unbiased manner and to acquire a large vision, a warm and generous heart and a deep desire to eliminate the ills of the world." Excerpts

The Medical University is primarily a University but with a special purpose. The university is the key knowledge institution of modern society. It is the producer of much of the theoretical knowledge which our society increasingly uses. It is the home territory of the intelligentsia who constitute a vital segment of our society. It is a formidable instrument of preservation and renewal of professional knowledge, expertise and experience. It is the commanding institution of a system that educates directly or indirectly the elite of the society, enabling the transference of the people to a higher level of absorption of science and technology.

In a sense, the University is the "**Expression of an age**", to use the words of Mr. Abraham Flexner. It is the repository of all successive scientific and technological achievements, which are embodied in theoretical and practical knowledge, the main beneficiaries being the students. Today, universities all over the world, are seen as institutions that could make a direct and powerful contribution to economic growth, physical and mental health and social justice.

The major advances in human thought have taken place through work in the universities. The universities have been the homes of new research, new findings, new discoveries in various sciences and in various branches of science, and impressive advances in science have had their roots mainly in the universities.

At the same time, the objective of a University is not merely to teach or to impart information or to equip the student with knowledge and skills of a specialised nature, that will enable him/her to fit himself/herself into the complicated pattern of living. No doubt, these are all necessary ingredients of an educational system that has to be devised to suit the changing needs of the population. But the fact remains that, in my opinion, the university must still concern itself with human considerations, upholding the basic human values. A student of a university does not merely learn a subject. He/she becomes someone by being exposed in the most impressionable period of his/her life to uplifting and elevating values which act as a catalyst to transform himself/herself into a highly developed being through a process of clash of mind with mind, inter-change of ideas and growth of knowledge of human nature. The university should be a fellowship of spirits, a society of seekers of truth who believe that there are things in life of vastly greater importance than the mere acquisition of material goods and comfort, necessary though they are in the current context of living. It should help the student to pursue ideals in an objective and unbiased manner and to acquire a large vision, a warm and generous heart and a deep desire to eliminate the ills of the world.

A Medical University stands in a unique position. Here we are concerned with the business of creating physicians and surgeons. These young crusaders are given the responsibility for providing the needed services to society in its fight against physical and mental ills. The amazing advances in medical sciences have made it necessary for a student of medicine to grapple with an ever growing volume of knowledge and information. As knowledge increases with its inevitable concomitant of specialisation, it has become necessary for the medical student to focus sharper and sharper attention upon a smaller and smaller area. Physicians and surgeons have to constantly improve their knowledge, widen their understanding, sharpen their diagnostic skills and provide for the appropriate treatment of the affected person. Western medical sciences have made outstanding progress, especially in the later half of the century.

Advances in Biology and Biochemistry and development in micro surgery have now made it possible for the Surgeon to insert his scalpel into the heart and brain, regions that until recently, were held to be sacred and inviolable. Transplantation of internal organs and replacement of human organs with artificial parts will become common place in the coming years. Progress in Pharmacology has reached a stage where it is possible to control memory, thought and desire by means of drugs.

These advances of modern medicine have greatly affected the entire human community, and continue to have a stupendous impact upon it. This impact of medical science upon man will grow in future. As the power of medical science to control life increases, the way the physician used his/her skills becomes the vital question of great concern to us. Medical science has been able to make great strides forward because of its new and effective methods of examining diseases. Science has given the methodology. Medical science has used it to discover new facts and conditions concerning the human body. The accumulated information has provided new ways of diagnosing the diseases and curing them. The scientific approach in the field of medicine has led the physician to regard human life as something purely material. The more deeply the physician involves himself/herself in the methodology of medical science, the more he/she is inclined to treat the human being as a mere physical entity. The physician may be in full possession of medical knowledge and information, but that may not necessarily give him/her medical wisdom.

T.S. Eliot echoed this feeling when he said:

> *Where is the wisdom we have lost in Knowledge?*
>
> *Where is the knowledge we have lost in information?*

Medicine requires the cool rational basis of science. It must also manifest humane sentiments. There must be a capacity to regard the life of any human being as something unique and special. The physician must have a mental posture or attitude that venerates inter personal communication. He/she must be a cool-headed technician as well as a warm, compassionate and concerned friend. The medical profession must build up its competence on the basis of a holistic spirit and a clear insight into the essence of life and human nature. Medical education must aim at the development of a total vision and a total perspective on the part of the physician. The Medical Specialists have their role and value. But the diseased person suffers with his/her whole being and not with the pathologically affected part. Hence there is need for a holistic look at the professional competence of the physician.

Generally, in Western society, today, medical specialisation has been carried to the extreme. The general practitioner is almost extinct. The specialists have their offices in a row under the same roof and a patient is passed from one to another. Quite often a patient's problem is how to discover which of the specialists he/she ought to consult first. The patient has no general practitioner who makes a diagnosis for him/her. In my opinion, particularly in a country like India, the general practitioner's services continue to be needed from the first to the last because, unlike the specialists, he has the knowledge of the patient and of his/her environment. Unless the specialist acts in the light of the knowledge that only the general practitioner can supply, he will be using his skills blindly and may in fact, function more harmfully than beneficially.

It is in this context that the concept of holistic medicine becomes vastly important. Sir William Oslar, the brilliant Canadian Physician and Medical Historian said that, *"the outcome of Tuberculosis had more to do with what went on in the patient's mind than what went on in his lungs"*.

Hippocrates said similarly that *"he would rather know what sort of patient had a disease than what sort of disease a patient had"*. The "Person", is, therefore, vastly important in diagnosis and cure. In the field of cancer research, it is quite often being demonstrated that patients who react to the diagnosis with a fighting spirit, survive better than those who respond with stoic acceptance or feelings of helplessness.

A medical practitioner would do well to appreciate the growing volume of evidence in favour of looking at the patient before the disease. This means that he/she must cultivate an active interest in the patient.The medical practitioner must come to know the patient very closely. The practitioner must respond to the patient's needs and the patient's fears or expectations, more warmly. I have known Doctors who erect thicker barriers than stone walls between themselves and their patients, in the name of science and objectivity. Quite often their ice-coldness serves to aggravate the disease rather than cure it. The Hippocratic Oath underlines the need to accept the patient as more important than the disease. It says :

> *"The regimen I adopt shall be for the benefit of patients according to my ability and judgement and not for their hurt or for any wrong"*.

The meaning of this oath must be expanded to take into account the need to understand the totality of the needs of the patients and to cater to them.

The Great Saint Thiruvalluvar defines the role of the physician in the clearest manner possible :

> *"Let the physician inquire into the nature of the disease, its cause and its cure and treat it correctly in accordance with the rules of medicine"*.

Underlying the statement is the authentic philosophy of the indispensability of a warm and humane relationship between the patient and the physician, which should govern the conduct and practice of a physician throughout his/her life.

I am convinced that the goal of medical education today, should be to produce physicians and surgeons who, with all their specialisation and professional competence, should ultimately think in terms of providing total medical care to the patients who come under their charge. The next step from this, is the understanding of the role of such a physician, in the context of the needs of the community. I am clear that the aim of medical education, should be to produce practitioners who must have the capability to provide comprehensive health care to the entire community. Health care should be curative, promotive, preventive and rehabilitative. What we may require today is the basic doctor, who would be a primary contact physician at the community level, providing early attention and diagnosis and who could manage the common illnesses encountered by him/her. Today's medical students are exposed to specialities, and many of them complete their academic course without a significant understanding of the general health or medical needs of the community. In countries like China and Japan, the physician is increasingly put through oriental medical disciplines so that he/she becomes a better community health doctor.

In our own country, we have an impressive record in our ancient medical practice, which emphasised an integrated approach to the treatment of the body, the mind and the spirit of the diseased person, in dealing with his/her problems. I would urge the Medical University to undertake research into this aspect, and try and see how at least an understanding of the essential principles of such an integrated outlook, can be imparted to our medical students.

The need of the hour today in our country, is Primary Health Care. Health Care must be made available at the door steps of the people who need it, especially in the rural areas. For long, specialised medical and health care has been centering around the cities, serving 20% of the population. It is time we bestowed the same care and attention on the people in the villages. The UN Declaration of *"Health For All By 2000 AD"*, is not merely a medical target. It is a social target. It has tremendous economic implications. Strengthening of primary health care is the only way by which we can reach this target.

We have laid the basis or foundation, with our Puratchi Thalaivar Dr. M.G.R. Nutritious Noon Meal Programme. We are extending health and medical facilities to the rural population living in the smallest and remotest of habitations. We have recently conducted free health check up camps covering the entire population of Tamil Nadu. We treated more than 51 lakh beneficiaries in about 9100 camps. The whole programme created a great awakening among the people, since medical and health care facilities were taken literally to their door steps.

At the same time, the medical and health needs of a growing population are enormous. While the rich who can afford to pay, have helped in the development of specialised medical care centres throughout the country, and these centres have come to offer highly advanced and specialised diagnostic and curative facilities, the poor, particularly, in the rural areas, who constitute the majority of the population, and who can ill-afford costly diagnostic and curative facilities, still have to depend upon the Government hospitals. The State Government is doing its very best to improve the facilities available in the Government hospitals. At the same time, it is necessary to supplement the efforts of the Government, with assistance from the private sector. I have seen the impressive growth of advanced medical centres in the past few years, in the private sector. New hospitals, new diagnostic instruments, a new generation of specialists, new comforts and luxuries, all at a price, have become common place. There is a commercial consideration in all these. But a few dedicated doctors in some private hospitals, still give the best of their time and attention to the poor and the needy, not with an attitude of charity but in a spirit of service. These glowing examples of noble and selfless physicians and surgeons, though very small in number, light up the path of medicine which some of you have chosen to tread on. As you move up in your professional life, I would request you to look upon service to the poor and the needy, as the most important goal of your life. I can tell you that, by sharing your knowledge and experience, by extending your service to the poor and the really needy, you will be giving the best of yourself and will earn the gratitude and admiration of all. There is as much pleasure in giving as in seeking, especially where the health of a person and that too, a poor person is involved. There can be no distinction between the rich and the poor, when it is a question of ill health. The suffering people need your help, irrespective of class or social distinctions, or economic status. Hence, I appeal to the social wisdom of every one of you, to utilise your professional knowledge and skills, to help in the medical and health care of our poor people. Our Sacred Lore has always emphasised that *Service to humanity is service to God.* Our doctors can and ought to be in the forefront in this regard.

Sri Sathya Sai Institute Convocation

Addressing the 11th convocation of the Sri Sathya Sai Institute of Higher Learning the President of India, Dr. Shankar Dayal Sharma called upon students to realise the importance of possessing human values and thus contribute to"national integration and universal humanhood".

Quoting from Bhagavad Gita, Dr. Sharma said such scriptures gave people an indication of the techniques useful in the attainment and consolidation of control over the mind in developing it and utilising the resources for purposes identified and determined by the intellect.

The Chancellor, Sri Sathya Sai Baba, in his benedictory address, said "Spirituality is the answer to world peace". He criticised those who thought education was the only way to acquire wisdom.

He said Indian education was not one which promoted slavery of the mind and one which made degree holders run from office to office in search of employment.

Sri Sai Baba said students should take a pledge to have social welfare in mind and work for the welfare of society and the nation. He advised the 300-odd students who received their degrees to remember the Bhagavad Gita in performing their duty.

The Vice-Chancellor, Prof. Sampath, said the students were under the able guidance of Sri Sai Baba.

The Union Home Minister, Mr. S.B.Chavan, the Governor, Mr. Krishan Kant, the Education Minister, Dr. P.V. Ranga Rao, the chairman of the Sri Sathya Sai Central Trust, Mr. Indulal Shah, Col. Joga Rao, a member of the trust, were present.

According to Prof. Sampath, major change in the new education policy appears likely with the Centre expressing interest in incorporating some salient features of the Sri Sathya Sai Educational system. Prof. Sampath said that on a suggstion from the Prime Minister, Mr. P.V.Narasimha Rao, a team of experts from the Human Resource Development Ministry had visited the residential university to study the educational system practised here.

"We have been informed that the recommendations of the committee to incorporate the salient features of our system with necessary modifications at the national level, have been favourably received by the ministry. The endeavour is expected to bring in some tangible benefits to the country as a whole", Prof. Sampath said.

A major change has taken place regarding the designation of the revised undergraduate programmes in the faculty of science, Prof. Sampath said, adding that this was an effort to motivate the students to achieve higher standards of performance in disciplines of mathematics, physics, chemistry and bio-sciences, as honours courses.

The institute had made an indepth introspective study of a decade's performance by subject experts from leading institutions. As a result, material which was now considered irrelevant and out of date, had been jettisoned.

Uniform Pattern in Admissions

"There is an urgent need to evolve a uniform pattern for admission to institutions of higher learning and the process should have greater openness", said the Tamil Nadu Governor, Mr. Bhishma Narain Singh. The list of candidates admitted should be published without any time lag after the processing of applications, conduct of written examination and/or interview as the case may be. He was inaugurating a symposium on "Current trends in curricular reforms and admission policies for higher education" organised by the Banaras Hindu University Alumni Association, Madras.

Mr. Singh said admission to institutions of higher learning, particularly professional courses, quite often lent itself to suspicion in the minds of students on its fairness. Sometimes litigation was resorted to, leading to delay in starting of courses or necessitating increase in seats and strength causing additional financial burden to the institutions and eventually to the Government.

On the question of framing curricula, the Kothari Commission and the National Policy on Education gave some guidelines for overall needs and objectives. Broadly, these called for foundation courses giving enough exposure to science and technology and humanities. In the changing context, a new approach to curriculum, evaluation and operational method was called for ugently.

But on introspection, the present system of higher education did not in general conform to the expectations of different committees and commissions. The system should be oriented towards producing useful citizens, and this could be achieved through a simultaneous reform in curriculum, teaching methodology and evaluation procedures.

The efforts of Pandit Madan Mohan Malaviya in bringing values to education by starting Banaras Hindu University were recalled by Mr. Singh on the occasion.

Dr. S.Lakshmi, Vice-Chancellor, Mother Teresa Women's University, said the educational policy itself was not faulty, but it suffered from ineffective implementation. Providing reservation to some sections was a laudable objective. But there were forces which interfered at the admission stage which produced negative results.

The aim was to enable entry of students with the correct aptitude and attitude, but the interference would have to be done away with. There was also need for a good classroom climate, which provided opportunity for the airing of innovative ideas.

Dr.K.Venkatasubramanian, former Vice-Chancellor, Pondicherry University, who presided, said the introduction of shift system in universities would increase the intake capacity. This system was in vogue in some Western countries.

Fr. Xavier Alphonse, Principal, Loyola College, outlined the admission policy framed by Jesuit institutions, giving preference to the poor and the disadvantaged, thus making the services of the institutions relevant to society. But this category of academically poor students required alternative financing and counselling.

Mr. A.S.Ram Kalia Principal, D.A.V. Higher Secondary School, highlighted the need to evolve a uniform nationwide school curriculum in science and mathematics as these subjects had a universal relevance. A comprehensive admission system for higher education and an open entrance examination for non-professional courses were called for.

Mr. K.Dayal Bhargava, President of the Alumni Association outlined the signifiance of having a State Council of Higher Education in Tamil Nadu and the measures it should take to streamline education.

All India English Teachers Meet

The 40th All India English Teachers Conference will be held on December 28-30, 1992 at the Sri Krishnadevaraya University, Anantapur.

The conference will deliberate on the theme "Modern Trends in English Literature and New Literatures in English". The topics proposed to be discussed at the conference include : Status of English in India, the medium of instruction and English Language/Literature Teaching.

Veteran Indian English Novelists like Mulk Raj Anand, Shastri Deshpande, Partap Sarma, illustrious Indian English poets like Nissim Ezekiel, Shiv K.Kumar, Ayyappa Panicker, well-known Indian critics like C.D. Narasimhiah, Annaiah Gowda, S.K. Desai, K.Chellappan are expected to attend the conference. Besides, Prof. John MacRae from Nottingham University, U.K., Ms Cathleen, a Fullbright scholar from USA and Prof. Harold Wolf and Prof. Givan from USA are also likely to grace the conference and speak on current literary scene in Britain and America.

Participants attending the conference can avail of the financial assistance for meeting their TA/DA expenses from the UGC unassigned grants available with the universities.

Further details can be had from Prof. K.Venkata Reddy, Department of English, Sri Krishnadevaraya University, Anantapur-515003.

Applied Geochemistry Dept. at Osmania

The Osmania University has started a new Department of Applied Geochemistry as a result of an agreement with the University of Utrecht (Netherlands). The new department will conduct a postgraduate course (M.Sc.) in Applied Geochemistry. The Vice-Chancellor of the university, Prof. M.Malla Reddy, inaugurated the Department recently.

According to Prof. K.Surya Prakash Rao, Professor and Head of the Department, the course covers, in addition to earth science studies, mineral exploration by geo-chemical methods, health and environmental geochmistry, etc. The field though advanced in western countries is being introduced for the first time in India.

Management Development Programme on MIS

The Department of Business Administration at Aligarh Muslim University recently organised a 15-day Second Management Development Programme on Management Information Systems (MIS) for the non-teaching staff of the university. The objectives of the programme were to impart knowledge related to the Management Information Systems, develop an understanding of the usage of computers in decision making, and to inculcate an attitude of accepting computers as friendly machines useful for decision making.

Inaugurating the programme, the Pro-Vice-Chancellor, Prof. A.H. Siddiqui, exhorted the participants to take up the challenges being faced by organisations such as universities and adopt modern techniques in administration. Prof. Mohd. Shafi, Pro-Chancellor of the university, in his valedictory address advised the participants to think of ways and means to make university administration more efficient and cut down red-tapism and delays in the process of decision making.

Katherine Kendall Award for Prof. Desai

The International Association of Schools of Social Work based in Vienna has conferred the Katherine Kendall distinguished service award on Dr. Armaity Desai, Director of the Tata Institute of Social Sciences and President of the Association of Indian Universities, at a world congress recently held in Washington.

Central Agril. University at Imphal

The Lok Sabha is reported to have passed a bill that provides for the setting up of a Central Agriculture University in Imphal during the Eighth Plan period. It would cost Rs. 54.30 crore and cater to the needs of the North-Eastern region.

News from Agricultural Universities

Shri Ram Memorial Lecture Series

Dr Khem Singh Gill, Vice-Chancellor, Punjab Agricultural University, recently inaugurated the 10th Shri Ram Memorial Lecture Series in management at the university campus. In his address Dr. Gill said that there was need to shore up the three tier-system of university, farmers and industry.

He said that agriculture and agro-industry formed the most important and largest sector of world industry. He disclosed that MBA course in agri-business would also be started at PAU.

Delivering the Memorial Lecture, Mr Ramesh Vangal, Managing Director, Pepsi Foods, stressed the "intensification" of agriculture and agro-industry through a dramatic increase in land productivity.

Advocating the application of system extending from laboratory to land to factory to consumer for enhancing productivity, Mr Vangal recommended the adoption of the "Holland model" in Punjab. He said the tiny country, roughly equalled to Punjab in terms of geographical size and population, had emerged the world's second largest exporter of farm products through intensification and the establishment of an efficient and sustainable agro-industry sector.

On the Pepsi experience in Punjab, Mr Vangal said the Pepsi intervention had catalysed a tomato revolution in the state. In a span of three years, the total production of tomato crop in the state had shot up from 15,000 tonnes to 100,000 tonnes. Yields leapfrogged from a static 7.5 tonne per acre to 16 tonnes per acre. Tomato harvest season extended from 25 days to 55 days and farmers' revenue increased manifold. Mr Vangal recommended similar incentives, all over the country.

Mr. R.N. Gupta, Financial Commissioner (Development), Punjab, in his remarks observed that agro-industry can lead the country towards economic independence, stability and provide a base for industrial development.

News from UGC

Countrywide Classroom Programme

Between 15th December to 21st December, 1992 the following schedule of telecast on higher education through INSAT-1D under the auspices of the University Grants Commission will be observed. The programme is presented in two sets of one hour duration each every day from 1.00 p.m. to 2.00 p.m. and 4.00 p.m. to 5.00 p.m. The programme is available on the TV Network throughout the country.

Ist Transmission

1.00 p.m. to 2.00 p.m.

15.12.92

"Preparation of Aluminium Chloride"

"So you are a Vegetarian?"

"Futurising Education"

16.12.92

"Non-Conventional Energy Sources – Solar Energy"

"Orchid Album"

"History of Indian Jewellery - I"

17.12.92

"Harvest of the Year 2000"

"Understanding Shelley - I Theory of Poetry"

"Draft Processing – An Introduction"

18.12.92

"Disputed Paternity"

"Evaluation - II"

"The Visual Environment and Behaviour - II"

19.12.92

"Theatre in Society - III From a Woman's Point of View"

"Vision Beyond Sight"

"Week Ahead"

20.12.92

No Telecast

21.12.92

"Home Lab. in Electricity and Magnetism"

"Promoting Entrepreneurs - An Interview"

"Teaching of Demand Forecasting - I"

IInd Transmission

4.00 p.m. to 5.00 p.m.

15.12.92

"Performing Titration"

"Lasers in Medicine"

16.12.92

"The Story of the Blue Planet"

"The Insect Eater"

"Ancient Egypt " Valley of the Nile"

17.12.92

"Optical Fibre Cables"

"19th Century Russian Literature : Fyodor M. Dostoyevsky"

"The City That's Miles Better Chandigarh"

18.12.92

"Enigma of Development"

"Desert Wildlife - The Graceful Blackbuck"

"Child Psychiatry - I Know Your Child"

19.12.92

"Nrityaganga - IV Expression of Emotions"

"Achieving the Best"

"Week Ahead"

20.12.92

No Telecast

21.12.92

"Solar Photovoltaic"

"Soil Testing"

"Towards a Bright Future The Economy - III"

Future Studies

After a review by an expert committee constituted by the UGC to evaluate the progress made by institutions supported under the Future Studies Programme it has been agreed that :

* the programme being inter-disciplinary/multi-disciplinary in nature, there should be a closer interaction between the user agencies such as industry, employment organisations, community, etc. and the organisers of the course;
* the university should involve faculty from all disciplines i.e. humanities, social sciences, engineering and technology, sciences, medicine, etc;
* the programme should be so organised as to be of practical value to the society and concerned agencies;
* placement of students should be an obligatory part of the programme;
* in addition to the whole-time courses, the university should also ensure certain facilities for inservice personnel in the field; and
* there should be an active interaction between different universities for exchange of resource material and relevant software.

In future, the programmes will be evaluated on year to year basis and those not working satisfactorily shall be phased out.

At present 8 universities are implementing the programme. These include : Andhra University, Bharathidasan University, Devi Ahilya Vishwavidyalaya, Gandhigram Rural Institute, Kerala University, Madurai Kamaraj University, Pondicherry University and Sri Venkateswara University.

Teacher Qualifications

The University Grants Commission has asked universities, deemed to be universities and colleges to strictly follow the regulations with regard to minimum qualifications for appointment of Lecturers, Readers and Professors notified in the Gazette of India on October 5, 1991.

In terms of the UGC's notification prescribing the minimum qualifications, a candidate is eligible for appointment to the post of lecturer in a university or a college only if he possesses a good academic record with at least 55 percent marks or an equivalent grade at the Master's degree level in the relevant subject and he has cleared the Eligibility Test for Lectureship conducted by the UGC-CSIR or a similar test accredited by the UGC.

In a letter to Vice-Chancellors of all universities, directors of higher education and secretaries to the State departments of education and State Public Service Commissions, the UGC has reiterated that relaxation from requirement of a minimum of 55 percent marks at Master's degree level is not permissible in any case. Those who have been awarded M.Phil. degrees upto March 31, 1991, or those who have already been awarded or would be awarded Ph.D. degrees by December 31, 1992 are exempted from qualifying the NET examination of UGC-CSIR, etc. There is, however, no relaxation for them in the minimum 55 percent marks at the Master's degree level.

Expert Committee on Grants

The UGC has constituted an 8-member Expert Committee headed by Justice K. Punnaiah, to examine the present policy, norms and the pattern of providing maintenance grants to the Central Universities and other higher education institutions which receive maintenance grants from the UGC. The other members of the committee are : Prof. M.V. Pylee, former Vice-Chancellor, Cochin University, Mr. M.R. Kolhatkar, Adviser, Planning Commission, Prof. N.S. Bose, Calcutta, Shri P.K. Umashankar, former Director, Indian Institute of Public Administration, Prof. C.S. Jha, Vice-Chancellor, B.H.U., Prof. S.C. Dube, former Chairman, Uchcha Shiksha Anudan Ayog, (M.P), Prof. Aizaz Ahmed, A.M.U and Prof. Tapas Majumdar, JNU.

The terms of reference also include necessary recommendations on policy measures for mobilising finances from internal resources by the institutions; suggesting norms for regulating expenditure on non-teaching/research activities and to examine and suggest norms regarding student/research student, and teacher and non-teaching staff strength.

Assistance to Century Old Colleges

The University Grants Commission (UGC) has agreed to provide special assistance of Rs. 20 lakhs to each of the 4 more colleges established during last century and completed 100 years of their existence to meet expenditure of capital nature like construction of academic buildings with UGC share on 100 percent basis. These colleges are Khalsa College, Amritsar (1882), P.R. Govt. College, Kakinada (1884), Government College, Ajmer (1886), Meerut College, Meerut (1892). With these, the total number of such specially assisted colleges has gone up to 49.

More Universities to Offer MBA

On the recommendations of All India Council for Technical Education (AICTE), the UGC has conveyed its approval for introduction of MBA courses in the Guru Ghasi Das University, Bilaspur, Kanpur University, Kanpur, and Manipur University, Imphal.

For running the MBA courses, each university will be extended Rs. 37 lakhs and Rs. 27 lakhs as non-recurring and recurring assistance respectively for 5 years.

Directory of Senior Academics

The University Grants Commission is updating the list of university and college academics in the country with their areas of specialisation so that the services of these academics could be utilised for various schemes and programmes of the UGC directed toward achieving excellence in higher education. The UGC greatly depends on the cooperation of the teachers in this task of compilation of the Curriculum Vitae of academics.

The senior teachers in various disciplines with at least 10-15 years of teaching/research experience may kindly fill the following proforma and forward the same to Shri A.N.Rai, Principal Information Officer, University Grants Commission, Bahadur Shah Zafar Marg, New Delhi-110002 by December 15, 1992.

Proforma

Summary biodata with major field of study

Data Code No.

(To be filled in the UGC Office)

Name

Date of birth

Whether belong to SC/ST category Yes/No

Postal Address

Educational Qualification : Year

(1) Master's Degree (2) M.Phil (3) Ph. D. (4) D.Sc. (5) Any other

Major field of Study/Research

Specialisation

Experience

Publications – Indian (number)

Publications – Foreign (number)

Books Published (Titles)

Membership/fellowship of professional bodies

(1) Indian (2) Foreign

Remarks

Signature of the teacher

Singnature of the head of institution/department (not applicable to those who have already served as heads).

News from Abroad

Edible Paper and Sponges

Edible paper and "sponges" in a variety of flavors are among the unusual new food products that have been developed by researchers at the Hebrew University of Jerusalem (Israel). The new products are based on hydrocolloids, which are water-soluble polymers. These hydrocolloids can be derived from natural or Synthetic sources and are fully edible. Hydrocolloid-based "sponges" can be used as the basis for low-calorie, cholesterol-free tasty socks that are both nourishing and filling.

Edible, hydrocolloid-based paper could prove useful as the wrapping for sticky food products, such as candies, and as packaging material of agricultural products instead of the currently used synthetic materials.

Hydrocolloids could also enable, for the first time, the baking of cakes and cokkies with self-contained droplets of wine, juice, or other liquids. These droplets could be spread throughout the dough, much as released only when the wrapped droplets were broken while being eaten. Such self-contained flavoring might also be suitable for new dairy products.

Another avenue of development being explored by the Israeli scientists is the possible use of hydrocolloids as a replacement for the filler materials used in bulky disposable products, such as diapers and sanitary napkins.

The Yissum Research Development Co. of the Hebrew University of Jerusalem is currently involved in securing a patent for this new process and is interested in finding investors who would apply the knowledge industrially.

Center for Environmental Studies

Israel's first Center for Environmental Studies was recently established along Tel Aviv's Yarkon River, amid acres of greenery. The new Center will focus on educational activities concerning the environment, ecology, conservation, recycling, gardening and landscaping, design and aesthetics, basic architecture, preservation, urban planning, and community beautification. A primary feature of the Center will be hands-on education. Special demonstration gardens and multi-media systems will permit students of all ages to learn in an innovative fashion. A comprehensive library, computer database, classrooms, coffee shop, and meeting rooms constitute the Center, which will be closely linked to similar institutions around the world.

INDIAN COUNCIL OF MEDICAL RESEARCH

Applications are invited upto **15th January, 1993 for the following posts at the Council's Institute for Research in Reproduction, Bombay :-**

1. Deputy Director (Medical)-(One post) – (Scale of pay of Rs 4500-150-5700)

Qualifications & Experience : Essential : a) MBBS with 12 years research/teaching experience of conducting and co-ordinating research studies related to reproductive health specially family planning (10 years research/teaching experience for candidates possessing M.D. (Community Medicine). b) Original work as evidenced by publications. **Job Requirements :** To assist the Director to design and implement various family planning programmes.

2. Senior Research Officer (Reproductive Biology) – (One Post) (Scale of pay of Rs. 3000-100-3500-125-4500)

Qualifications & Experience : Essential : a) M.Sc. (1st class) in Biology/Zoology. b) 6 years research/teaching experience in the field of reproductive biology (2 years research/teaching experience for candidates possessing Ph.D. in Biology/Zoology). **Desirable :** Experience in Reproductive Biology/Endocrinology. Job **Requirements :** Candidate will be required to develop and evaluate fertility regulating agents in Laboratory animals. Expertise in hormone assays, immunocytochemical techniques, histopathological evaluation of reproductive organs is desirable. **Age :** Below 50 years for the post of Deputy Director and below 45 years for the post of Senior Research Officer. SC/ST candidates allowed relaxation in accordance with Govt. of India Rules. Candidates belonging to SC/ST communities will have to furnish certificates from prescribed authority in the required format printed at page 345 of brochure on reservation of SC & ST in services which can be supplied on demand failing which they will not be entitled to the concession admissible to them, if any. Since it is not possible to call all the eligible candidates for the interview, the applications will be shortlisted for the purpose and the decisions of the Director General will be final. The number of vacancies to be filled may vary at the time of actual selection. In the event of non-availability of suitable candidates for advertised posts, the positions can be filled up at lower level. Allowances as per Central Government rules are admissible on the above pay scales. Benefits of pension admissible. Private practice is not allowed. However, NPA as per rules of the Council is admissible to medical graduates only. Candidates called for interview for the post of Deputy Director will be paid 1st class rail fare and for the post of Senior Research Officer will be paid 2nd class rail fare by shortest route, on production of documents. Applications from employees working in Central/State Govt. Deptt./Public Sector Undertaking and Govt. funded research agencies must be forwarded through proper channel. Application forms can be obtained from the office of the Director General, Indian Council of Medical Research, Ansari Nagar, Post Box No. 4508, New Delhi-110029. Forms duly completed should be sent to the Director General, Indian Council of Medical Research. Ansari Nagar, Post Box No. 4508, New Delhi-110029 with a crossed IPO for Rs. 8/- payable to the Director General, ICMR, New Delhi. SC/ST candidates are exempted from this payment. Incomplete and late application or without postal orders will not be entertained. The name of the post and of the Institute/Centre must be indicated in the Application Form. Separate application form should be submitted for each post with crossed IPO for Rs. 8/- and for each Institute/Centre.

COMMUNICATION

Universities & National Integration

I congratulate Prof. G. Ram Reddy for the candid and courageous observations he made in his inaugural address at the South-Zone Vice-Chancellors Conference (reported in the *University News*, November 2, 1992) about the "need to improve the internal efficiency" of our universities. Delay in admissions, in conducting examinations and in announcement of results is vicious circle leading to the academic calendar falling years behind schedule. These are bad enough to depress our student generations.

What is worse is that all our universities, with no exception, woefully lack a sense of post-examination service. When students approach the authorities for services like the issue of provisional certificates, migration certificates and Degrees and transcripts, they feel frustrated at the callous indifference of the university administrators and feel compelled to resort either to corrupt practices or violent methods.

Another very pertinent issue raised by Prof. Ram Reddy is that the universities are not playing their role in promoting national integration. The UGC should come out with schemes for exchange of teachers, at least for short periods, initially, without which our universities have become centres of monotony and inbreeding. The faculty is not exposed to new challeges, nor the students, to innovations and novelties.

Regarding the opportunities for admission, it should not be confined to the children of NRIs, Defence Personnel and Central Government employees. Given the required standards, any student from any part of the country should be allowed to seek admission in any university in any other part of the country. That would take us a long way in promoting understanding and emotional integration among several language groups and communities in the country. There is a deplorable north-south divide in matters of admission to universities. The alleged poor academic standards of a university, want of adequate knowledge of Hindi/English, the obnoxious sons-of-the-soil brand of patriotism, purely subjective whims and prejudices of professors – anything is a handy excuse to reject a candidate for admission. The Government colleges in Madhya Pradesh for instance, would rather keep the seats vacant than admit candidates from the neighbouring states. Colleges and universities elsewhere are no less narrow in their admission policies. Will the UGC issue instructions (and what is more, insist on their implementation) to universities to broaden their outlook and revise their written and unwritten chauvinistic admission policies, in the larger interests of national integration?

J. Srihari Rao,
Deptt. of Linguistics & Languages,
Ravishankar University,
Raipur-492 010 (M.P.)

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- **Adi Sankara And Sri Aurobindo/** *V. Narayan Karan Reddy*

A study in contrast of two great Indian thinkers-Adi Sankara and Sri Aurobindo. Sankara showed the path of liberation and Sri Aurobindo that of transformation and total change.
1992, vi, 86pp., Demy 8vo, Rs. 70

- **An Analytical Approach to Problems of Indian Agriculture: A Theoretical and system approach/** *B H Joshi*

Discusses the issues that face Indian agriculture and delineates changes that took place in agriculture since 1947. Analyses most of the agricultural problems in theoretical framework with system approach.
1992, xii, 496pp., Tables, Figures, 3 B & W Maps, Demy 4 vo, Rs. 995

- **Between the real and the Surreal: Modernism and the Avant-Garde in the American Drama of the nineteen sixties (New World Literature Series:59)/** *B. Yugendernath*

Provides a critical insight into the American drama of the sixties. A complete guide to the study of modern drama.
1992, xii, 246pp., Demy 8vo, Rs. 190

- **British Parliamentary papers relating to India 1662-1947 in 3 Vols./** *Adrian Sever*

A complete listing of British parliamentary papers and acts of parliamentary relating to British involvement on the sub-continent of India. In three volumes.
Vol,1: 1992, viii, 182pp., Demy 8vo, Vol.2:1992, II,464pp., Demy 8vo, Vol.3: 1992, ii, 142pp., Demy 8vo, (Set) Rs. 1600

- **Dr. Ambedkar and Punjab/** *D.C. Ahir*

Gives an over-all view of the deep relationship that was forged between Dr. B.R. Ambedkar, saviour of the down-trodden, and the people of Punjab.
1992, viii, 142pp., 4 B & W Plates, Demy 8vo, Rs. 125

- **The Elderly Population in developed and developing world: Policies, problems and perspectives/** *P. Krishnan & K. Mahadevan (Eds.)*

Suggests ways and means of promoting proper rehabilitation of senior (elderly) citizens. Throws light on the positive life-styles of the elderly in China, Japan and India (Kurichia tribe).
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- **The ELT curriculum: Emerging issues/** *S Ramadevi & Others (Ed.)*

Result of an international seminar held in February 1988. Reflects development in ELT during the 1980s. Includes some valuable papers presented at the seminar.
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- **Fashion Styles of Ancient India: A study of Kalinga from earliest times to 16th century A.D/** *R.P. Mohapatra*

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- **Gender and Literature New World Literature Series: 60/** *Iqbal Kaur (Ed.)*

An anthology, Shows how sexual politics gets reflected in literature and the difference it makes to writing and reading from a woman-centred perspective.
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RESEARCH IN PROGRESS

A List of Research Scholars registered for Doctoral Degrees in Indian Universities

PHYSICAL SCIENCES

Mathematics

1. Purnachandra Rao, Koya. **The role of the free gravitational field in the inflationary cosmology.** Bhavnagar. Prof J Krishna Rao, Department of Mathematics, Bhavnagar University, Gujarat.

2. Satya Rani. **A study of jordan decomposition in group rings.** Panjab. Prof I B S Passi, Department of Mathematics, Panjab University, Chandigarh.

Statistics

1. Narinder Kumar.**Some classes of nonparametric subset selection procedures using sub-sample extrema.** Panjab. Dr G P Mehta and Dr A N Gill, Department of Statistics, Panjab University, Chandigarh.

2. Vijayasree, G. **Estimation of ordered parameters of exponential populations** Panjab. Prof Harshinder Singh, Department of Statistics, Panjab University, Chandigarh.

Physics

1. Jain, Vivek.**Studies on thermostimulated discharge current and spontaneous current emission in polyblend films.** H S Gour. Dr K K Saraf and Dr P K Khare, Department of Physics, Dr Harisingh Gour Vishwavidyalaya, Sagar.

2. Rahim Kutty, M H. **Crystal growth and micrographic studies of molybdates and semiconducting compounds.** Kerala. Dr. K Sreedharan Pillai and Dr C Mohanakumaran Nair, Department of Physics, University of Kerala, Kerala.

3. Ramachandran, M N. **Theory for liquid crystal surface.** Kerala. Prof Y Singh, Department of Physics, Banaras Hindu University, Varanasi.

Chemistry

1. Aneja, Ritu. **Biological activity of synthetic peptides.** Delhi. Dr Ramesh Chandra, Department of Chemistry, University of Delhi, Delhi.

2. Bhatia, Dimpan. **Synthesis and selective modification of oligonucleotides of biological and abiological importance.** Delhi. Dr R C Rastogi, Reader, Department of Chemistry, University of Delhi, Delhi and Dr K C Gupta, Scientist, CSIR Centre for Biochemicals, Mall Road, New Delhi.

3. Dargan, Rashmi. **Effect of synthetic peptides on heme metabolism and biosynthesis.** Delhi. Dr Ramsh Chandra, Department of Chemistry, University of Delhi, Delhi.

4. Kaul, Vijay Kumar. **Studies in Lewis acid stabilized azacarbanions.**Panjab. Prof S V Kessar and Dr Paramjit Singh, Department of Chemistry, Panjab University, Chandigarh.

5. Khera, Haritma. **Kinetics and mechanism of complexation reactions(biologically significant) of metal ions with biochemical ligands using stopped flow spectrophotometer.**Delhi. Prof H C Malhotra, Department of Chemistry,University of Delhi, Delhi.

6. Sharma, Vibha. **Synthetic studies in benzopyrone series.** Delhi. Prof S K Grover, Department of Chemistry, University of Delhi, Delhi.

7. Sunita.**Synthesis, characterization and co-ordination chemistry of fluorinated and chlorinated alkoxides of some main group elements.** Panjab. Prof S L Chadha, Department of Chemistry, Panjab University, Chandigarh.

8. Tabrizian, Mehrdad. **Studies towards synthesis of carbamates and related compounds.** Panjab. Dr Y P Gupta, Department of Chemistry, Panjab University, Chandigarh.

9. Vinod Rattan. **Synthesis of some naturally occurring biologically active compounds.** Panjab. Prof O P Vig and Dr G L Kad, Department of Chemistry, Panjab University, Chandigarh.

Earth Sciences

1. Bharat Rattan.**Geology and geochemistry of the Saladipura grantitoids and associated rocks, Sikar district, Rajasthan, India.** Panjab. Dr S P Kapila and Prof A K Prasad, Departmentof Geology, Panjab University, Chandigarh.

2. Bhave, Vivek Narayan. **Hydrogeological studies around Sultanpur,north-western part of Kota district, Rajasthan.** H S Gour. Dr L P Chourasia, Head, Department of Applied Geology, Dr Hari Singh Gour Vishwavidyalaya, Sagar.

3. Bhol, Bibhuti Bhusan. **Techno-economic feasibility of dolomites belonging to Bijawar basin in type area near Hirapur, Sagar district.** H S Gour. Dr R K Trivedi. Department of Applied Geology, Dr. Hari Singh Gour Vishwavidyalaya, Sagar.

4. Khosla, Ashu. **Dinosaur eggshells from late cretaceous lameta formation of the east-central Narbada river region: Biomineralization and morphotaxonomical studies.** Panjab. Prof Ashok Sahni, Department of Geology, Panjab university, Chandigarh.

5. Mukherjee, Pradip Kumar. **Geozoology in the mineral exploration : A case study of diamond, tin and copper deposits.** H S Gour. Dr P O Alexender, Deptartment of Applied Geology. Dr Hari Singh Gour Vishwavidyalaya, Sagar.

6. Pal, A K Amiya. **Computer application to some problems in structure geology and magma tectonics with special reference to Central Indian Bundelkhand granitic massif.** H S Gour. Dr P P Roday, Department of Applied Geology, Dr Hari Singh Gour Vishwavidyalaya. Sagar.

7. Ram, Ramashankar. **Geodynamics and modelling of Indian lithosphere.** BHU. Prof Avadh Ram, Department of Geophysics, Banaras Hindu University, varanasi.

8. Singh, Neena. **Contribution of the quaternary freshwater microfauna and microflora of the Indian subcontinent.**. Panjab. Prof S B Bhatia, Department of Geology, Panjab University, Chandigarh.

9. Sreenivasa Rao, A. **Geological resource evaluation studies of Sagar District regional rural planning and development using remote sensing techniques.**H S Gour.Dr S N Pandey, Department of Applied Geology, Dr Harisingh Gour Vishwavidyalaya, Sagar.

Engineering & Technology

1. Christopher,C Chandrasekar. **Preparation and characterisation ofperovskite oxides.** BHU. Dr Om Prakash, School of Materials Science andTechnology, Institute of Technology, Banaras Hindu University, Varanasi.

2. Dwivedi, Arvind Prakash Dhar. **Fluid flow and heat transfer in heat exchangers.** BHU. Prof S N Gupta, Department of Mechani-

cal Engineering, Institute of Technology, Banaras Hindu University, Varanasi.

3. Mahendra Kumar. **Structure and properties of rapidly solidified Al alloys containing transition elements.** BHU. Dr G V S Sastry , Department of Metallurgical Engineering, Banaras Hindu University, Varanasi and Dr D Akhtar, Defence Metallurgical Research Laboratory, Hyderabad.

BIOLOGICAL SCIENCES

Anthropology

1. Nasrpour, Abdolsamad. **Cytogenetic investigations in North Indian population with special reference to spontaneous abortions and still-births and other teratological conditions.** Panjab. Prof J C Sharma, Department of Anthropology, Panjab University, Chandigarh; Dr G Grewal, Department of Haematology and Prof S Gopalan, Department of Obstetrics and Gynaecology,Postgraduate Institute of Medical Education and Research, Chandigarh.

2. Sharma, Chhaya. **Human physical growth and development.** Delhi. Dr Raghbir Singh, Department of Anthropology, University of Delhi, Delhi.

Biophysics

1. Verma,Anil.**Studies on surface topography and cuticle of three selected species of insects.** Panjab. Dr K C Kanwar, Department of Biophysics, Panjab University, Chandigarh.

Biotechnology

1. Phulka , Parneet Kaur.**Design and development of an environmentally efficient rural kitchen using solid biomass fuels.** Panjab. Dr S K Sharma, Department of Energy Research Centre, Panjab University, Chandigarh.

2. Shah, Sangeeta. **Immunogenetic studies of a GnRH vaccine.** BHU. Prof Ajit Sodhi, Department of Biotechnology, Banaras Hindu University, Varanasi.

Microbiology

1. Agnihotry ,Ajeet Kumar. **Microbial utilization of lignocellulosic wastes for the production of cellulases,ethanol and single cell proteins.** HP. Dr T C Bhalla, Department of Bio- Sciences, Himachal Pradesh University, Shimla.

2. Chopra, Upasna. **Immunobiology of experimental pyelonephritis in mice.** Panjab. Dr (Mrs) Saroj Sharma and Dr Sanjay Chibber, Department of Microbiology, Panjab University, Chandigarh and Prof N K Ganguly, Department of Experimental Medicine, Postgraduate Institute of Medical Education and Research, Chandigarh.

Botany

1. Balia, Anand Sagar. **Studies on the mycorrhizal relationships of Pinus wallichiana and Suillus sibiricus.** HP. Dr T N Lakhanpal, Department of Bio-Sciences, Himachal Pradesh University, Shimla.

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1. Gupta,Shipali . **A taxonomic account of termites of Haryana and Chandigarh areas.** Panjab. Prof H R Pajni, Department of Zoology, Panjab University, Chandigarh.

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Medical Sciences

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Grosby, Steven. "University of the twenty-first century": Report on the discussions. **Minerva** 30 (2), 1992, 269-95.

Shapiro, Harold T. Functions and resources of the American university of the twenty first century. **Minerva** 30 (2), 1992, 163-88.

Shattock, Michael. Internal and external threats to the university of the twenty-first century. **Minerva** 30(2), 1992, 130-62.

Wilson, Brian. Studies in the conceptualisation of a university. **Studies in Hr Edn** 17(3), 1992, 295-303.

EDUCATIONAL PSYCHOLOGY

Glick, Nancy L. Job satisfaction among academic administrators. **Research in Hr Edn** 33(5), 1992, 625-39.

Warren, Jonathan. Learning as an indicator of educational quality. **Studies in Hr Edn** 17(3), 1992, 337-48.

EDUCATIONAL SOCIOLOGY

Dash, Tapas R. Inequality in educational development of tribes in Orissa. **J of Ednl Planning and Admn** 5(1), 1991, 75-83.

Harichandan, Dhaneshwar. Attitude of post-graduate students towards reservation policy. **Progress of Edn** 67(3), 1992, 52-6

Isaac, Paul D and others. Parental educational level, gender differences, and seniors' aspirations for advanced study. **Research in Hr Edn** 33(5), 1991, 595-606.

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Passi, B K and Pal, Rajendra. Resource persons of the Academic Staff College. **New Frontiers in Edn** 22(3), 1992, 326-30.

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Chaudhary, Sohanvir S. Television in distance education: The Indian scene. **Indian J of Open Learning** 1(1), 1992, 23-31.

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Grubb, W Norton. Postsecondary vocational education and the sub-baccalaureate labor market: New evidence on economic return. **Eco of Edn Rev** 11(3), 1992, 225-48.

Johnes, Geraint. Bidding for students in Britain: Why the UFC auction 'failed'. **Hr Edn** 23(2), 1992, 173-82.

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DISTANCE EDUCATION

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Renga Ramanujam, P. Search for value driven leadership in distance education: A wild-goose chase! **Indian J of Open Learning** 1(1), 1992, 45-51.

Singh, M P. Experiences from and impact of an innovative correspondence course-based distance education programme inagriculture. **Indian J of Open Learning** 1(1), 1992, 11-3.

COMPARATIVE EDUCATION & COUNTRY STUDIES

Johnstone, D Bruce. Higher education in the United States in the year 2000. **Prospects** 21(3), 1991, 430-42.

Jones, Hywel Ceri. Promoting higher education's contribution to the developing European Community. **Prospects** 21(3), 1991, 443-54.

Ruhela, Satya Pal. Education in Somalia: Past, present and future. **J of Fdnl Planning and Admn** 5(1), 1991, 27-47.

INSTITUTIONAL PROFILE

Deshpande, Prakash M. Yashwantrao Chavan Maharashtra Open University and its academic programmes. **Indian J of Open Learning** 1(1), 1992, 5-9.

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Editor :
SUTINDER SINGH

WASTAGE IN HIGHER EDUCATION

Om Prakash*

Until recently, the higher education sector used to be considered the crowning glory of the educational edifice, and statistics showing its expansion used to be presented with pride as indicators of progress. But in recent years, a feeling has been gaining ground that the crown is becoming too costly, and that our educational system is growing unduly top heavy. On the one hand, the lack of resources keeps pushing farther and farther the target date of achieving universal primary education, on the other, the investments in the area of higher education have not produced results commensurate with the expectations. Except for the peaks of excellence, the average level of achievement of graduates has not been particularly impressive. The rush of admission to universities is not because of any spurt of dedication for academic, literary and scientific pursuits but because degrees are still linked with white collar jobs. It is, therefore, argued that the priorities may be reconsidered, and resources be diverted more towards the areas of primary, secondary and vocational education. While we may not entirely agree with this view, we can ill afford to ignore it altogether. Realising that additional resources may not be readily forthcoming for higher education sector, the maxim that resources saved are resources generated needs to be practised. It is, therefore, imperative that we examine the existing system with a view to identify wastage and under-utilisation of resources so that steps could be planned to plug the leakages. Such a study should not be confined to the subject matter of monetary resources only but should take a holistic view so as to consider proper utilisation of human, material and physical resources as well.

The Human Resource

Let us begin by examining the position as regards the utilisation of the most precious of the resources viz., the human resource. Of late, there has been a welcome realisation that the people of the country are its human resource, although there is the need to remember at the same time that the people constitute the nation, and that all development is ultimately for the betterment of the people. All educational activity hovers round the human beings – the learners and the teachers. So it should be a matter of concern to ensure that the youthful years of the young men and women that enter the portals of universities and colleges are properly utilised in turning them into leaders of thought and carriers of values for tomorrow and that they are not allowed to just drift aimlessly in and out of the campuses for want of having anything else to do. Today, it remains an unfortunate fact that a large majority seeks enrolment in universities in search of degrees instead of knowledge, what to talk of learning, although a majority of the graduates ultimately settle in jobs for which a degree is not really necessary. The vocational stream and the job-oriented courses have not yet been able to attract and accommodate any sizeable numbers. The desirability of delinking degrees with non-technical jobs has often been talked of, but not yet attempted. It appears that the outcome of such a radical step frightens the academics and the politicians alike, though their reasons could be different.

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Sprinkling the subjects of job-oriented and vocational nature in the courses of general education is often advocated to make them 'relevant'. Subjects like Textile Dyeing and Printing, Salesmanship, Utilisation of Forest Resources, Hotel Management, etc. are suggested to be introduced as optional subjects in the first degree courses in colleges. But one may wonder whether salesmanship could be taught to one not having intrinsic knack of it, and whether the graduate would take to the vocation of dyeing and printing himself or would expect employment as manager of a production unit. Would it not be more worthwhile, as well as economical both from the points of view of time and money, to have well-equipped specialised institutions for imparting such skills and practical training through whole-time courses of shorter duration? The pattern of growth of computer education could be an object lesson in this direction. It is time to realise that all kinds of trainings and imparting of skills at the tertiary stage is not higher education. While a touch of socially useful productive activities may form a component of curriculum in schools, the vocational stream should come to its full bloom at the 'plus two' stage. Thereafter, the majority could go to specialised institutes preparing skilled manpower for self employment as well as for middle level jobs in trade and industry. Only those having inclination and aptitude for academic pursuits should come to the colleges and the universities. Statistics could be cited to say that in our country the fraction of the population in the relevant age group coming to the colleges is still not large, and that the system should prepare itself for accepting larger numbers. But the proper inference from such data would be that while there could be a need of attracting and enabling more of the talented young men and women to continue the academic pursuits, the area of higher education is certainly not for the unmotivated masses.

The admission rush in the beginning of academic session creates a false impression of inflated demand of seats in the existing colleges as also of demand for new colleges. But soon the unmotivated masses who took admission with a view to take advantage of perks like the scholarships, the subsidised accommodation in hostels, travel concessions in trains and buses, or to enjoy the fun of union elections, cultural activities or only to delay being described as 'unemployed', are nowhere to be seen in the thinly attended classrooms or the playgrounds. The rule of minimum attendance in classes often goes unimplemented. This provision is decried as being an obsolete measure of ensuring captive audience in the classrooms. But with rapidly increasing facilities of non-formal and distance education through the open universities, whatever justification that ever was of the students enrolling in the colleges but not attending the classes regularly vanishes completely. If the demand for new colleges and for seats in existing colleges is assessed realistically adopting the criterion of students regularity, a rationalisation and consequent pruning is bound to follow, resulting ultimately in the prevention of much wasteful expenditure.

Politics & Politicians

Unrestricted and unregulated entry into colleges and universities of unmotivated and ill equipped young men and women not only leads to wastage of their youthful years but also damages the cause of higher education. When large numbers are involved, excellence suffers and mediocrity flourishes. Consequently, the curricula remain unchallenging and the standards of evaluation remain low, not demanding any sustained whole-time effort in the name of teaching-learning. 'One week series' of books and keys, condensed courses of tuitions and coaching classes, dependence on expected questions and their equally expected answers and such other short cuts are found sufficient to ensure a 'pass' in the examinations even by those who do not overtly indulge in unfair means. Unfortunately, perpetuation of unchallenging standards suit the politics that is penetrating deeper and deeper into the campuses. All major political parties have their respective youth wings as well as students federation, *parishad* or union. University and college union elections are contested on their platforms, involving not only the blessings but also direct support of the parties. Politicians of all hues and shades desire that the youth be drawn more and more into the processions, demonstrations, dharnas, bandhs, etc. they may choose to launch at their sole convenience not limited by/to the academic calendar in any way. This is possible only so long as teaching-learning remains a sporadic part-time activity, not demanding sustained application and attention. True, harnessing the power of the youth is essential for the success of any worthwhile movement, and the youth of our country were actively involved even in the freedom movement. But they must learn to discriminate between a serious movement and a political showmanship. The statesmen should seriously consider putting into practice the oft-repeated platitude of keeping politics off the campuses. If attempted seriously, this would go a long way in saving a good bit of the time and money individual learners as well as the society as a whole have to invest on tertiary education.

The aspect of under-utilisation of the other human resource involved in the process of higher education, viz., the teacher, may also be taken note of briefly. We may not agree with the oft-repeated remark that the university and college teachers work part-time in return of handsome pay packets intended for whole time employment. But the fact remains that the actual number of teaching days and working hours usually fall much below the not-so-impressive norm of 180 days in a year and 40 hours a week respectively. It is true that the effort put forth by dedicated scholars constantly engaged in enhancing their own learning and advancing the frontiers of knowledge cannot be measured in terms of hours and days. But a large number of teachers engaged in private tuitions, part-time business and speculation, clandestine political activities have brought disrepute to their noble profession. Here also politicians resolve to keep off the campuses and not patronising the unworthy among the teachers would go a long way in raising the morale of the profession more than any amount of sermonising and eulogising on the Teachers' Day. The profession also needs to evolve its own work ethics, indicators of accountability and methods of performance evaluation.

In the States having a large number of institutions run and managed by the government, transferring the teachers from one college to another is a favourite pastime, often resulting in square pegs being placed into round holes. The teachers are posted here and there unmindful of the aptitude, attainment and specialisation. Even in educational administration, convenient persons are drawn to the head offices in preference to others having a deeper understanding of the system and concern for its improvement. Quite naturally, best advantage is not derived out of the available highly qualified personnel.

Teachers who do not have confidence in themselves and faith in the system may not just be brushed aside as being a tolerable waste of human resources in this densely populated country. The damage they do to the cause of education by their silent inaction is immense. They become status-quo-ist, defeating all innovations in curricula, teaching technology, and methods of evaluation. They make out fictitious record of classes taken and students' attendance to justify on paper their own existence and to avoid comments on the quality of their lectures. The lure of dwelling into such fiction has pervaded the practical classes in science subjects to such an extent that in spite of the examinations being conducted by external practical examiners the results in practical examinations are usually near cent percent. The teachers' inability to prevent unfair means in examinations stands acknowledged through enactment of legislation (in U.P. and Rajasthan) to deal with the menace as a cognizable offence. No wonder, the radical suggestion accepted and recommended by Kothari Commission in 1966 that the teaching units should increasingly function as autonomous colleges went virtually unheeded for two decades. The concept again did not meet the desired response on its being adopted as a vital plank in the National Education Policy, 1986. At the same time, the academics turned diplomats see nothing wrong around them when they are made convenient members of boards of inspection. Consequently, no university has a record of having disaffiliated a college for academic offences like exploiting teachers and other staff, failing to provide minimum library and laboratory facilities, charging capitation fees, and indulging in various kinds of manipulations and malpractices.

Financial & Physical Resources

Having attempted at some length to develop a concern for the wastage, or at least under-utilisation of the invaluable human resources involved in the system of higher education, we may proceed to glance through the wastage of financial and physical resources rather briefly. Uplanned proliferation of non-viable colleges and uncalled for multiplication of universities are twin factors to be reckoned with in this connection. The number of colleges in the country has crossed seven thousand. But almost three thousand of them do not meet the UGC norms for receiving financial assistance. The non-viable colleges only spread substandard education in famished conditions but at higher than average per capita cost. While no moratorium or establishment of new colleges could be advocated, it may well be insisted that they may not be allowed to be opened only to satisfy whims and vanity of individual donors or the group rivalries. In order to derive maximum returns for the non-recurring and recurring expenditure on establishing and running the colleges, they may be opened only at places identified through regional surveys conducted by the State Councils of Higher Education. Philanthropic organisations may well be encouraged and invited to help in correcting regional imbalances, but private enterprise should not be permitted to start colleges like commercial concerns to make profits by adopting all kinds of dubious means. Similar care needs to be taken in the matter of introducing additional subjects at the undergraduate and the postgraduate levels in existing colleges. Decision in such matters may not be taken on false considerations of the prestige of the college, and indirectly of the trust running it, or for inflating the status of its principal or some other favoured teacher.

What is relevant in the matter of proliferation of colleges is all the more relevant in the matter of proliferation of universities. As soon as a cluster of well established colleges in a city come to have the status of residential university or the campus of a teaching-cum-

AIU ANNUAL MEETING POSTPONED

The Annual General Meeting of the Association of Indian Universities (AIU) and the Vice-Chancellors' Conference, convened by the University Grants Commission, scheduled to be held at Pondicherry University on December 20, 21 and 22, 1992, stand postponed sine die, due to unavoidable circumstances.

affiliating university, it comes to acquire a top heavy and many times more costly structure that is too familiar to require any description in detail. The same purpose could be served equally well, if not better, by conferring autonomy on good colleges and by placing marginally larger funds at their disposal. The autonomous colleges would be able to do everything that a residential university does, from developing their own curricula to evaluating their students, but for the exception of awarding degrees. We may hasten to add that economy is only a by-product, and the concept of autonomous colleges is recommended mainly as a means of releasing the academic freedom from the Vice-Chancellor's chamber and of carrying it to the grassroot level of teachers and learners. Of course, autonomy needs to be accompanied by accountability.

Sometimes attempt is made to justify the steep rise in the number of universities on the ground that any university should not have larger than a suggested number of colleges affiliated to it, implying that with the increase in the number of colleges, the number of universities required to affiliate them should also increase proportionately. This argument is based on the assumption that the departments on the campus of the university are in constant communication with the affiliated colleges, providing them leadership as well as assistance in the academic sphere. However, the reality could not escape the UGC's Gnanam Committee when in Section 13.5 of its Report entitled "*Towards New Educational Management*" it observes, "However, it appears that, by and large the thrust of Postgraduate departments of affiliating universities has shifted to the traditional role of teaching and research and that the purpose for which they were essentially established, i.e. providing academic leadership to the affiliated colleges, has receded into the background." So, for most of the colleges the university is the authority that prescribes the syllabi, conducts the examinations and awards the degrees. If this state of affairs is to continue, and if the number of colleges and their students or the number of examination centres and the examinees be the only problem, then its more economical solution could lie in adoption of the computers and other tools and methods of management. After all, we have the examples of the Institutions of Engineers, Chartered Accountants, etc. conducting correspondence courses and examinations on national level with comparable reputation of reliability. It is, therefore, high time to insist that new universities may be founded and institutions recognised as deemed to be universities only on purely academic considerations. A distinction between meeting the regional needs to remove imbalances on the one hand and meeting the parochial demands based on regional rivalries needs be understood and made. Wherever genuine need of establishing a new university is felt, the model of 'University for Colleges' may be followed seriously and sincerely. In this model, there is no danger of all benefits of investment remaining localised to one place as the University would not have any 'campus' at its headquarters in the usual sense of the term. Instead, it would function as the resource centre for affiliated colleges, showing its impact by influencing and improving the performance of the college.

Resource Sharing

If we take care not to be pound foolish, then there could be nothing wrong in being pennywise as well. This discussion on under-utilisation of resources may not be concluded without noticing the wastage at the microlevel of individual academic units. Sheer adversity of rising prices and shortage of funds should teach the virtue of pooling and sharing the resources among institutions not necessarily located in the same city or in a close neighbourhood. The first thing that comes to mind in this connection is the college library. One reason why the reading habits of students remain poor is that the timings of their classes and of the college library are usually the same. Consequently, they could go to the library either in a hurry to grab the loan of books or to fill the time of an unanticipated vacant period. For them, the library is no different from a godown of old editions of books, or a book bank. They have, by and large, not experienced the pleasure of wandering and meandering in the world of letters and information. A library does not become impressive merely by the size of its stock of books. The pains taken in matters right from the selection and procurement of books, to their proper classification and cataloguing, elegant display, easy accessibility, safe upkeep and prevention of damage make all the difference between a good and a bad library. The facilities offered to the readers for sitting and working in the library halls are also important. Since acquisition of books is fast becoming a costly proposition, there is urgent need of evolving systems of networking of libraries through computerised indices, information storage and retrieval systems, etc. with inter-library loan facilities not only for books and journals but also for floppy discs, video cassettes of educational material and the like.

Similar considerations apply to the college laboratories. Not only the gross number of hours per day or per week for which they work, but also the availability of equipments in proper working conditions needs be taken into account when assessing the extent of proper utilisation of funds spent on them. Academically more important is the need to ensure that instead of remaining a ritualistic repetition of obsolete exercises, the prescribed practical work is properly correlated with the modern theory content of the syllabus and is designed to present a realistic picture of its applications in industrial and other areas.

Thus, there appears to be sufficient room for introspection by those who are engaged in and associated with tertiary and higher education sectors. It is true that the country is still spending much less than the six percent of the GNP on education accepted as being necessary input in the National Policy on Education document and that no virtue should be made out of continuous deprivation and poverty. But it would be highly desirable if the demand for additional resources is accompanied by willingness for undertaking better resource management both on macro and micro levels, including proper management of the precious time of the learners and their teachers.

Development of Institutional Culture in Higher Education

Yoginder Verma*

Organisational Culture

Education is a continuous process of enriching the mind and cleaning the inner tools of the consciousness. It purifies mind, the ego, the senses and the reason. One gets education in different forms, formal as well as informal starting from his birth (even earlier as believed by Indian philosophy). Institutional education has long lasting impact because the institution provides an environment of learning and deliberately undertakes this activity. The arrangement of different parts of organisational system gives rise to formalisation i.e. the evolvement of certain defined patterns of relationships. At the same time, spontaneous, indeliberate and informal relationships prove to be more strong, dictative and long lasting.

The vibrations of formal and informal relationships build a base for the emergence of an organisational culture in an institution. A college or university has its own climate or set of norms and behaviour. This climate is more than the sum total of values and norms held by its members. In other words, a college has its own entity and takes on a life of its own apart from any of its members and acquires immortality. The members i.e. students, teachers and non-teachers share similar meaning about different aspects of the institution. This is called organisational culture. The members expect defined patterns of behaviours from each other. The organization's character is known by the demonstration of certain behaviour manifestations by its members.

Characteristics of Educational Institutions

In any college or university, its teachers, students and non-teachers attach certain meaning to its various characteristics. This shared meaning is called culture. Main characteristics of an educational institution are asunder :

1. *Creativity*

The types of attitude held towards the function of creativity in teaching, learning, research and extension.

2. *Communication Pattern*

The views about the prevalence and acceptance of a specific pattern of communication.

3. *Control*

The nature of mechanism conforming the achievement of plans and goals.

4. *Autonomy*

The extent to which members feel freedom to undertake the process of learning, research, extension and administration.

5. *Conflict Tolerance*

The level to which members can tolerate interference and disturbance from others.

6. *Identity*

The members' perception about their importance in the system.

7. *Direction*

This is the level of unanimity among the members about the aims and goals of education.

8. *Integration*

The nature of members, feelings about their coordination and linkages with other departments.

9. *Management Support*

The attitude towards management about is being supportive and cooperative in members' activities.

10. *Reward System*

The availability of incentives and the evaluative comments of the members about their utility.

Productive Culture

The common meaning attached to these characteristics will give birth to a specific types of culture. It is difficult to say whether good meaning attached to these characteristics results into a productive culture. A good culture is one which fully achieves the aims of education. We may notice a wide gulf between an individual's value system and organisational values. This will create an incongruent fit. A person will immediately fit in if his value system easily mixes up with existing culture. The challenge before the educational manager and the teacher is twofold :

1. To create a productive culture.
2. To sustain the culture.

The responsibility of generating productive culture lies with the top manager i.e. the Principal and the Vice-Chancellor in a college and university respectively. The head of institution sets the ball rolling through his thoughts, actions, vibrations and behaviours. His management style will emit certain reflections which become rules and norms for conduct. A small act of his initiates many new ripples. For example, a casual attitude adopted by the Principal in dealing with a disciplinary problem will discourage the teachers to be disciplinarian. Contrary to it, effective tackling will imprint entirely different norms. Culture also assumes certain form with the adoption of certain rules and regulations, curriculum and policies. The background knowledge, skills and values held by the members also play significant role in the creation of culture.

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In any college or university, different formal groups may not have a uniform culture. Different teaching departments and segments may have different sub-cultures. For example, a department of literature will have different culture than that of a science department or a sports department. These sub-cultures co-exist and integrated themselves with each other. As a result of it, a common or dominant culture develops. It reveals the existence of certain core values. These values are the building blocks of productiveness of a culture. If these values are of higher order, a productive culture will emerge and vice-versa. The question which needs further exploration is what high order values are. A look at the recommendations of University Education Commission (1948), Committee on Religious and Moral Instruction (1959), Education Commission (1964-66), International Commission on Education (1972) and Ramamurti Committee (1990) provide us a range of certain basic values. Some of these are truth, right work, non-violence, discipline, secularism, harmony, commitment, confidence, integrity, scientific temper, humility, reverence and renunciation. The spirit of all values is love. Love at physical level produces a right work. Love at intellectual level is truth (scientific temper, discrimination, innovations for social welfare, etc.). Love becomes non-violence at consciousness level and peace at feeling level.

Sustaining the Culture

If the dominant culture is difficult to be changed easily we call it strong culture but if it breaks away and a new milieu develops, it will be a weak culture. In a college or university system, the culture may be weak or strong. The tendency of its becoming weak is more because of *en masse* entry of students every year. But where the management is strong we observe firm adherence of certain core values. Here the management is conscious and prepared to cope-up with new cultural shocks. How does it sustain? – is the second major issues.

Socialization

Management and existing members tend to sustain its culture. They motivate new comers to adopt it. It is done through socialization. Socialisation is the process indoctrinating and training the entrants about what is important in an organisation and do's and don'ts of behaviour. Since the culture of a college is more dynamic, a slight neglect may cause disaster. The management has to plan and implement the process of socialisation right from starting the process of selection. Some institutions hold entry tests including personal interviews in order to assess the abilities and overall fitness of the person to be their student. If the basic knowledge and attitudes differ from the organisation's core values, the person will not fit in that culture and may damage the existing culture.

Unfortunately, the management of our colleges and universities is not conscious about its function of deliberately planning the sustenance of culture. The main steps in a planned socialisation will be :

1. *Pre-arrival stage*

The college management, teachers in their respective departments and other members, pre-conceive the type of new entrants. They form some opinions about their knowledge, skills, values and attitudes on the basis of their profile. Many times management decides not to permit entry of certain types of persons as they may be observed to be less adaptive to the existing culture. Hence, the entry of certain categories of persons is discouraged.

2. *Environment*

When the students enter the college, they interact with the college environment. Many of their notions and impressions stand shattered. They form certain impressions about their seniors, teachers, management and overall atmosphere of the college. The responsibility of college administration and teachers is to educate new comers about its ethos through various acts such as formal socialisation in the classroom, demonstration of certain behaviour and observing certain rules and norms. The decision has to be taken about rejection or retention of certain values brought by the members as well as the manner in which to encounter. If the encounter is proper the members will internalize the organisational values. Chances of change are more at this level because the new entrants are more prepared to accept it.

The existing members also need socialisation on their being promoted or whenever organisation wants to adapt to new changes more effectively. This is possible with formal training of members including orientation programmes, refresher courses, seminars, etc. The college may adopt different methods of socialisation as given below :

(i) Guidance and Counselling to individual students through the involvement of faculty and senior teachers.

(ii) Classroom and departmental orientation to be implemented by the head/teachers of the department.

(iii) Stay-in-orientation is the responsibility of warden and senior students.

(iv) Institutional orientation needs to be planned with a comprehensive visit of the Principal. He will involve the faculty, non-teachers and students in this process.

(v) Formal training is carried out to improve the competence and form new attitudes towards job. In view of changing aspirations of the society, students and technology it needs to be properly planned and implemented.

(vi) Adoption and development of certain rituals, stories, material symbols and language peculiar to the working of the college through sign boards, notices, publications, informal interactions, cultural functions and imposition of certain rules and regulations.

3. *Metamorphosis*

The third stage occurs when the new students have internalised organisational norms. They feel comfortable with the organisation, their roles and other members in the institution. As a result of it, certain manifestations will disappear while others will become more adhesive and permanent. This is observed in case of all institutions. The permanent component of this culture will emerge as a dominant culture. This whole process is described as metamorphosis.

4. *Outcome*

The persistence and emergence of a culture will produce certain tangible effects on the behaviour manifestations of its members. These effects will be observable in the form of involvement, commitment, turnover and productivity. Any educational administrator must be aware about the fact that culture moves organisations. Teachers and students develop an image about the usefulness of their activities. This affects their morale and level of satisfaction.

Main Responsibility

The culture of a college is the outcome of certain interventions particularly initiated by the teachers and the principal. We have the examples of certain institutions where the teachers follow religiously certain code of conduct. They dedicate their knowledge and actions to the observance of certain values. Their practice is no different from their precept. Students are provided a system of values where they adopt these practices happily. This gives rise to a desired culture. One of such examples is that of Sathya Sai Institute of Higher Learning, Prashanthi Nilayam where the institutional culture tends to achieve institute's mission. Different segments, departments and organisations maintained by the institute share uniform ethos and contribute healthy norms for the evolvement and sustenance of overall culture. A look at the working of the organisations managed by the Institute convinces one that the main responsibility of creating, and sustaining the culture lies with the top man and teachers.

Teachers have difficult task of creating a culture. Shifting their responsibility on others, teachers often talk about unsupportive behaviour of other systems such as management, students, society, senior faculty, politicians and bureaucrats. This question sounds relevant in view of the fact that culture is a collective phenomenon. But here we must not overlook the fact that it is individuals who make organisations and particularly in the educational institutions it is the teacher who matters more in influencing the thoughts, behaviours and language of students. Therefore, the main responsibility of socialisation and creation of a productive culture lies on the teacher.

The teacher has to realize his role. His role is not merely of imparting knowledge and inculcating certain skills among students but also to awaken their inner self and convert them into vibrating and humble human beings. This is possible only when he is himself enlightened and knows the meaning of education. Hence it is imperative that the teachers should be made aware about their responsibility in building-up an educational culture.

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COLLEGE AND COMMUNITY DEVELOPMENT

K.G. Deshmukh*

The process of involving the university system to participate in extension programmes was initiated by the University Grants Commission with the specific objective of securing equal importance to 'Extension' as the third dimension with teaching and research. The concern of the New Education Policy of 1986 is essentially to indicate the strategies of making the system of education an effective instrument of modernising and dynamic change. It is in such a situation, specially when the pace of change is to be accelerated to achieve the targets in a given frame, the mobilisation of institutions of higher learning and their students become necessary.

The infrastructure of higher education provides a large reservoir of human energy and resources. It is, therefore, imperative to mobilise the resources for the nation building activities and utilise the infrastructure for the national development to achieve the desired objective.

To achieve this goal, the universities and colleges must be involved in the programme of eradication of illiteracy, population education and continuing education programmes with an emphasis on the needs of weaker section of the society and women.

The scientific and technological growth in India has certainly upgraded the levels of living in the rural areas, but the thrust required is to provide the opportunity of utilising more scientific and technological knowledge of advancement for the betterment of rural population. For this purpose, it is necessary to have short term need based education programmes under the extension activities to be offered to rural populations. This goal could be achieved by the 'commuity colleges' with a culture of life long education. It is rightly said that the present society must be a society given to life long learning.

To give thrust to these programmes, the NSS wings of the universities have been involved to undertake the MPFL programmes, environment protection, ecology development, plantation, health education, population education, rural reconstruction, wasteland development and national integration.

To achieve the goal, it is necessary to absorb the 'extension culture' in the university structure as an integral component of the system. It is also necessary to institutionalise the extension programmes so that they continue to grow along with academic development in higher education. These programmes could be included as applied component or part of the Foundation Course, and implemented through community services, project work, etc. If these programmes are institutionalised, not only NSS students but also the entire student community would be working for the extension programmes.

National Social Service (NSS)

The NSS was started in 1969-70 for promoting social awareness and sense of responsibility, discipline and dignity of labour amongst college students. The scheme uses the leisure time of the students during their undergraduate studies for social work in the community which helps the students to know the community problems. The scheme has brought the NSS students in direct contact with the community problems and development process. Activities undertaken in NSS have included enrichment and conservation of environment, health and family welfare, nutrition programme, population education, non-formal education and assistance to local authorities in relief and rehabilitation work at the time of natural calamities. The special campaign programmes during vacations have resulted in many durable community assets. The National Education Policy has given special emphasis to NSS.

During 1986-87, the NSS wings of the universities were asked to involve 50% of the NSS students to work over the Mass Functional Literacy Programme (MFLP). This is in addition to the programmes with the NSS, like social development, plantation, health education, slum development and rural reconstruction work, etc. They have also been involved in a large number of national projects like environment protection, wasteland development, national integration, etc.

By and larger during these years, the NSS has done the work in the above programmes. In addition 50% of NSS volunteers are involved in MPFL work. The NSS volunteers have to work exclusively for imparting literacy, thereby closing all other diverse options and avenues of community work for personality development. This amounts to a major departure from the basic character and objectives of NSS and hence a realistic assessment of the whole situation is called for.

Literacy Work

Involving merely 50% of students of NSS for the literacy work would not solve the problem, since there are a large number of illiterates in the country. For this particular purpose, it is necessary to involve non-NSS volunteers in collaboration with the society to undertake this work. This is in keeping with the National Policy of Education (NPE). The NPE has placed faith in country's youth, teachers and workers for promotion of literacy, i.e. the entire educational system would commit itself to this cause. Making the illiterates, as literates is a gigantic task in a country where mere than 100 million people are illiterates. The approach by involving the minority of students and teachers in this programme would not solve the problem. Therefore, this activity has to be accepted as curricular and hence all students in the affiliated institutions should work for the same. It would not be out of place, if the programme of action as initiated by countries like Cuba, Sudan, Tanzania and Sri Lanka is taken into consideration. Cuba, for instance, had closed down the schools and colleges and asked the students and teachers to work for the literacy programme. This may not be possible in a country like India, but if the students during the undergraduate programme are asked to work for this programme atleast for a year before getting their degree, the problem could be solved. However, this would require thinking at the national level.

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The colleges and universities can provide technical resources for the programme. Large number of students in every institution can be engaged atleast, in the motivational work at the pre-literacy centres and surrounding communities. Post-literacy programme can also be undertaken. Some of the departments in Social Sciences can undertake research under the system to augment the activity. The programme of eradiction of illiteracy can also be taken up by the universities in collaboration with the concerned department of the government which is involved in this work and the non-governmental agencies.

The university students have to work under heavy curricular schedule and hence there has to be a proper coordination between curricular work and co-curricular programmes. The students would certainly like to take part in all these activities, provided they become curricular and degrees and diplomas of the universities show the activities undertaken by the students. Due weightage also will have to be given in further studies and employment.

In a country like India, where there is a large number of rural colleges, literacy programme can be undertaken as a major activity and these colleges could be transformed into Community Colleges. In effect, this would become the *Mass Movement* in the university system.

The proposal for involving college and university students in an extensive way in the literacy programme was suggested by Professor Yash Pal, the former Chairman of the University Grants Commission, who, made an appeal for *mass action for national regeneration*. These programmes would be more successful, where, there are sustained efforts at promoting primary education. The example of Kottayam, which achieved 100% literacy, is worth emulating. However, for programmes of this type, adequate financial assistance would be required. Let us hope that sustained efforts in this direction would not let India emerge as the largest illiterate democracy by 1995.

Continuing Education and Extension

The continuing life long education and extension is an integral part of education, which is accepted by both, the developed and the developing world. Due to the technological development in our country, living condition particularly of urban population is upgraded. However, because of lack of education the development process has not reached the rural masses. It is, therefore, necessary to augment the skills and knowledge of their professions through a process of modern scientific practices. Education and development have to be integral part of each other. It is, therefore, imperative to restructure our curricula at all stages of education with emphasis on social relevance. All institutes of higher learning must extend their facilities to the community in their area in the form of short term need based educational programmes. Involvement of students in the process could get them the opportunity of field experience, and development schemes of the government could reach the doors of the rural masses. In effect all colleges would become community oriented institutions participating in extension and action research.

The programme of continuing education should be undertaken through distance education which is one of the important tools of imparting knowledge to large population. During recent years, national open university and open universities at the state level have been established. Traditional universities in collaboration with open universities should evolve the programmes of distance learning for the community.

The UGC in its programme of action has given the following broad objectives for continuing education :

1. The universities should establish linkages with the community.
2. To provide opportunities for disseminating knowledge in all walks of life.
3. To enrich higher education by integrating continuing and adult education programmes and extension work in the system.
4. To provide an opportunity to the faculty and the students to an exposition of field experience.
5. To augment research in 'Extension'.
6. To supplement education, through non-formal/distance learning.
7. Under continuing education and extension programmes, the emphasis also has to be given on population education, science for the people, environmental protection and national integration.

Population Education

It is necessary for the younger generation to know the dynamics of population growth and its implications for their own future well being. Properly planned population education progrmme must be introduced at different levels so that the students would be aware of their responsibilities to the future generation. It is an educational programme designed to study population situation, human reproduction and community welfare and their impact on quality of life in the family, community and the nation.

As recommended by the University Grants Commission, the activities under this programme can be taken through the Adult, Continuing Education and Extension Departments. Each college must have a Population Education Club, which would give training to the students in various aspects of population education activities. The universities can introduce at the undergraduate level population education components. Well planned exhibitions can also be organised by these colleges in the rural areas highlighting the needs of population control.

The activities at the community level, would be supportive to the Adult Education Centres and this would also promote an awareness between population development and quality of life.

Science for the People

It is necessary to educate the rural community to make them scientifically literate. Science pervades all walks of life and therefore, it is necessary to educate the rural population atleast in the following areas :

1. Science in Agriculture
2. Environmental Protection
3. Science Literacy and Medicine
4. Body Care
5. Rural Housing

Under this programme, each college should have a *Science Club* for the villages. Activities under the club can be worked out by each college depending on the environment.

Environmental Protection

There is a mass concern with environmental protection and development. The problem has assumed critical proportions particularly in the developing countries. The environmentalists and the developmentalists always seem to be at cross roads. If they combine their activities in a meaningful way, the objective of protecting the environment can be achieved. The environmental education has become a necessity and it should be incorporated as part of the formal education at all levels, the importance of which was highlighted at the 'Earth Summit' held lately at Rio de Janeiro. The aim of this education is to enable people at large to understand the complexities of the environment and the need for nations to adapt their activities. It is extremely necessary to preserve the environment which covers all aspects like ecology, social and cultural and other developmental problems. Today the entire world including the developed and developing countries is concerned with the environmental preservation.

National Integration

This is one of the important activities undertaken under the NSS programme. Still one feels that effective involvement of universities and the colleges in promoting national integration is lacking.

The universities now have to play a major role in the socio-national reconstruction of the country. The concept of universities as academic preserves is now obsolete. They have now to be in tune with the dynamics of the time calling forth the universities to share in the overall growth responsibilities of the nation. The notion that this extension work will displace the universities from their academic aims and standards will have to be done away with, and instead derive its meaning and sustenance from participation and sharing in the national goals.

Single Umbrella Approach

All activities like adult literacy, NSS continuing education and extension programmes could be organised under one umbrella. For this purpose, the university will have to create a cell to promote and coordinate these activities.

An advisory committee at the university level to promote and coordinate the activities is necessary. Under the scheme the *Zilla Parishad* at the district level will have to be involved and the activities will have to be implemented at taluka and village levels. It is necessary that the NSS officers at the college level should always be associated with the adult education programme. It is necessary that the UGC should concentrate on these issues so that the programme could be taken up atleast for the next five years. The State Resource Centre of the government for the programme should coordinate the work being done in different universities and it shall be the responsibility of the State Resource Centre to prepare resource material for the purpose. The following strategies could be considered by the universities and the colleges as recommended by the UGC.

1. Elastic approach to be adopted in consideration of the diversity of the needs of our Panchayats and the area.
2. To have the wider dimensions of extension activities in the context of developmental education.
3. To bring the university system closer to make community a partner in all educational endeavours.
4. To invite peoples' initiative and participation in developmental process.
5. To institutionalise linkage between university, community and home.
6. To develop audio visual and other materials for the purpose.

Community Colleges

If education and development have to be the integral part, it would be necessary to institutionalise extension and make community as place of learning for students to solve its problems, thereby college would also become a place of learning for the community. Education would thus go at the doorstep of the commuity. It would thus be necessary to transform – a few established colleges and 'Community Colleges', and give them complete autonomy for experimentation and innovation.

Dr. V.S. KRISHNA : MAN OF GREAT VISION

M.R. Rao*

> "Dr. Krishna's incessant encouragement, his ready accessibility, informality and kindness enabled us to achieve the best that we were capable of".
>
> – *K. Satchidananda Murty*
> *(Former Vice-Chairman, UGC)*

Dr. V.S. Krishna reached the pinnacle of his academic and administrative career as Chairman of the UGC, but unfortunately only for a short while before his premature death. He was recognised as one of the great Vice-Chancellors of India and was Chairman of the Inter-University Board which met in Ceylon in 1957. As head of the academic community in Andhra University, he was held in high esteem and loved by students and teachers alike, for both his standards and his personal virtues. He visualized that the university should be an integrated community of scholars, students and staff. He had a clear vision of how to integrate the development of the University with the nation's development and was uniformly efficient and effective as Vice-Chancellor of the Andhra University. He had a rare skill of finding the right things and also doing the things rightly. Dr. Krishna possessed a fair complexion, a charming personality and kindness of heart towards the small and the big, the rich and the poor and enemies and friends. It was for this reason he was called an "Ajathasatru" He believed in good academic standards and honest administration.

Dr. Krishna succeeded Dr. C.R. Reddy, the founder Vice-Chancellor, Andhra University, who laid down the Vice-Chancellorship in 1949 in order to take up pro-chancellorship of Mysore University. He was first elected by the Senate of the Andhra University for a period of three years effective from 8th December, 1949. Again he was re-elected twice in 1952 and 1955. Thus he was the elected Vice-Chancellor for three terms i.e. nine years from 1949 to 1958. Again he was appointed under the new policy of selection from a panel as Vice-Chancellor for a period of five years from 1958-63 but he resigned the post on 14th January, 1961 to take up U.G.C. Chairmanship at New Delhi.

Dr. Vasireddy Sri Krishna was born on October 8, 1902 in a village called Pedapalem in Guntur District. While still at school he took an adventurous step and left for England for matriculation from London University and enrolled himself later at Oxford University. After graduation from Oxford University in Modern Greats (Philosophy, Economics and Politics) he returned to India in 1930. Before joining the University service, he worked with the Imperial Bank and then the Maharajah of Bobbili. Then he joined the University as a Lecturer in Economics in the Department of History, Economics and Politics in June, 1931. He left the department in 1933 for his doctoral study in Economics in Vienna, Austria. He obtained the Ph.D. with a thesis on the Gold Standard and rejoined the Andhra University in the Department of History, Economics and Politics in 1936. He was promoted as Reader in Economics in July, 1938 and was appointed Warden of the Andhra University Hostels. The Senate of the Andhra University, at its meeting held on 18th March, 1939 elected him as Registrar for a period of five years. He took charge as Registrar on 26th April, 1939 and resigned the post in 1942 in order to take up the position of Vizagpatnam District Board Professorship of Economics in the new Department of Economics. Dr. V.S. Krishna was appointed as Professor of Economics on October 25th, 1941 but he was relieved from the post of Registrar on 15th March, 1942. The syndicate of Andhra University paid its tribute thus : " The Syndicate ....placed on record its appreciation of the services rendered by Dr. V.S. Krishna as Registrar and the perfect manner in which he kept up the dignity and integrity of the Office beyond question, beyond reproach." Subsequently Dr. Krishna became the Head of the Department of Economics and continued as such till 1947. He was also the Head of the Department of Commerce during the period 1944-47. He was elevated as Principal of Andhra University Colleges in the year 1947, the post he held till he became Vice-Chancellor in 1949.

He had training and apprenticeship in all the posts under the able guidance of Dr. C.R. Reddy, the Founder Vice-Chancellor. Dr. Krishna had the opportunity of taking advantages of historical events which occurred in the country and the State. While he was acting Vice-Chancellor, the University Education Commission (Dr. Radhakrishnan Commission) visited the Andhra University, Waltair during 18-20 March, 1949. The Commission suggested the future lines of development of the University. The establishment of UGC in 1953 had provided the confidence and courage to take up new areas of research and courses in the University. Finally the formation of Andhra State in 1953 and

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Andhra Pradesh in 1956 provided advantages for the development of the University.

Dr. Krishna was an exemplary Vice-Chancellor in conducting the affairs of the University. He was a voracious reader and always kept himself in touch with the latest developments in Science and Technology as well as in Arts and Social Sciences. He was a lover of the classics and fine arts and music. He fostered a sense of fraternity among faculty by attending regularly the Faculty Club and participating in its activities. The Andhra University used to celebrate an "Andhra Week" for the promotion of Arts, Literature, Dance and Drama in the month of December every year in the Open Air Theatre in the Erskine College of Natural Sciences. The Vice-Chancellor was a regular attendant for all the sessions and was welcomed by affectionate applause of the teachers, students and staff. Dr. Krishna founded an innovative informal organization known as "Research Forum" which used to meet once a month. It was a meeting place of Research Guides, Professors, Scholars and Research Scholars. The Forum used to discuss new frontiers of knowledge and possibility and exploration of inter-disciplinary studies. Everyday in the afternoon Dr. Krishna used to spend some time in the library and afterwards attend the office for two hours from three to five.

The flow of funds from the Central, State and the UGC was liberal and he took meticulous care in spending each rupee for the development of the University. The cardinal principle he developed in the opening of the new teaching and research departments was that the captaincy of the discipline should be in the hands of a highly qualified and competent person of international standards. Availability of money was not the only criterion for opening of new teaching and research or specialisations in any discipline; the need and the right man decided the issue.

The Central Government sanctioned a capital grant for the development of Pharmacy and Chemical Technology and full-fledged courses leading to the degrees of B.Phram. and M.Pharm. were organized in 1951. Similarly in the Chemical Technology new specialisations were introduced such as Electro-Chemical Technology in 1952 and Petroleum Refinery Engineering in 1959.

The Department of Geology was diversified by the introduction of a two year Applied Geology course in 1952 and later it became M.Sc. (Tech) Applied Geology. Ore Dressing, an inter-disciplinary one year diploma course was also designed through the collaboration of the departments of Geology and Chemical Technology in 1954.

Dr. Krishna understood the "telescopic" progress of Physics from Pure Physics to Nuclear Physics from Nuclear Physics to Space Physics. He took the initiative for the development of Nuclear and Space Physics in the Physics Department. Applied Physics was separated from Pure Physics Department in 1946. In the beginning, nuclear research laboratories were set up as a part of the Physics Department in October, 1954. It attained the stature of a full-fledged department in 1956. The UGC visiting team recommended one year course for those who had passed B.Sc. (Hons.) Physics. With the abolition of honours courses, the department started offering the two years M.Sc. (Nuclear Physics). At the initiative of Dr. V.S. Krishna, the Physics Department started research on Space Physics, and later the department offered M.Sc. in Space Physics with UGC aid.

The subject of 'Statistics' was taught in the disciplines of Mathematics, Economics and Commerce and it was initially a part of the Mathematics Department. A full fledged M.Sc. course in Statistics of two years duration was started in July, 1951 and a separate Department of Statistics was constituted in January, 1952. An innovation was also introduced in Economics and Statistics Departments. A student of M.A. Mathematical Economics was given the facility to join M.Sc. Statistics of one year. Similarly the M.Sc. Statistics students could join M.A. Mathematical Economics of one year to get either of these degrees additionally.

Dr. Krishna knew the importance of the third dimension of the University i.e. Public Service. The University had done a lot of public service during the Godavari floods in 1951. He was particular that science departments should contribute something for the scientific development of the nation. Under his leadership, a team from the Geology Department together with experts in Geophysics and Chemical Technology conducted a survey of Godavari Delta in 1955. The team located a seam of quality lignite at a depth of 240 feet at Thatipaka village and also struck high pressure natural gas in the same area. The team wanted to extend its operations even to the West Godavari District. After 35 years, the ONGC rediscovered the natural gas in the same area i.e. Godavari Delta in the East Godavari District.

Dr. Radhakrishnan was responsible for the starting of two university colleges, College of Arts and Commerce and J.V.D. College of Science and Technology. Dr. C.R. Reddy was responsible for the starting of Erskine College of Natural Sciences and University College of Law. Dr. Krishna's great contribution was starting of the College of Engineering on a new campus known as North Campus. The North Campus owes its origin to Dr. Krishna.

Immediately after the World War II, the Andhra University contemplated to start Marine and Aeronautics Engineering courses in the University. The Government sponsored a College at Vizagapatam in 1946, but due to lack of accommodation at Vizagapatam, an Engineering

College was started at Kakinada temporarily, but subsequently, was made permanent there. In 1953, at the instance of Government the Engineering College was established in the University in 1955 with three branches i.e. Civil, Mechanical and Electrical. Dr. Krishna took it as a challenge, and on a war-footing temporary accommodation was provided on the existing University Campus (South). The Government did not approve the original proposal of starting Marine and Naval Architecture Courses at Andhra University. The IIT, Kharagpur had started the Naval Architecture course. Dr. Krishna pleaded "........... the Central Government does not want duplication. But still there is a strong case to open atleast Naval Architecture here, for which this is the only place available in the country at present and I do not think it was a desirable thing on the part of the Kharagpur Institute to start a course in Naval Architecture without having facilities for practical training there". Dr. Krishna took immediate action for the acquisition of sites for the construction of permanent buildings. The University acquired around 150 acres and built permanent buildings on the newly formed North Campus. The Engineering Department was transferred to the spacious North Campus in 1960.

The Government of India offered a chair in the Sanskrit language in 1954 and a new department was added to the Arts and Commerce college. The University Education Commission suggested new professional courses i.e., Business Administration, Public Administration and Industrial Relations in its report in 1949. Dr. Krishna approached the UGC to start the two year full time MBA in the Department of Commerce and the UGC sanctioned two teaching posts in 1957. The Andhra University was the first in the country to start two year full-time MBA. In the same year a two year full-time P.G. Diploma in Social Work was started with Labour Welfare & Personnel Management and Rural Welfare as specialisations. At a later stage, the specialisation of the Labour Welfare and Personnel Management attained a stature of a separate department as Department of Industrial Relations and Personnel Management.

Dr. Krishna was keen to develop postgraduate studies in the professional courses. He took the initiative in starting postgraduate studies in Law in 1950 and Medical Science in 1952.

Dr. Krishna developed all the faculties in all dimensions of teaching, research and extension and the standards were comparable to other advanced centres. Dr. Krishna used to appeal to the grants-giving authorities to provide liberal assistance both for teaching and research. In his annual address at Twenty Ninth Convocation on Saturday the 3rd December, 1955, he said :

> I have no doubt in my mind that the emphasis which the University places on research will greatly help the country in the long run. If it were mere teaching, we might be able to cut our activities to the limit of our resources but that would be very ill-advised. It is a very wrong idea of a modern university to equate it with mere teaching, however advanced it might be. The Grants Committee in Great Britain rightly pointed out that it would be possible to separate the higher teaching from research at the risk of the vitality of both. Bearing this fundamental aspect of education in mind, the University authorities have always tried to give their utmost and anxious attention to the problem of research in the various faculties constituted here. Both in the material facilities of laboratory and equipment and well-trained personnel of the highest calibre, we have been striving to keep up atleast with the first class institutes of the West. This can, of course, be done only in a limited number of subjects and in a particular range.

Dr. Krishna was firm in the belief that the universities should advance in the creation and increase of knowledge. He jealously guarded the autonomy of the University and at the same time saw to it that high standards in teaching, research and examinations were maintained. The image and reputation of the University was enhanced during Dr. Krishna's tenure as in the days of his distinguished predecessors, Dr. C.R. Reddy and Dr. S. Radhakrishnan.

Dr. Krishna resigned the Vice-Chancellorship on becoming Chairman of the UGC on 14th January, 1961. The university community including his family, friends and the public were not enthusiastic about his elevation because they knew it was a big loss to the University. The University bade him farewell with mixed feelings of happiness and sorrow. It was a great misfortune that just after one month, the University was plunged into deep sorrow on the sudden and untimely demise of Dr. Krishna on 16th February, 1961.

Dr. Krishna rendered devoted and distinguished services as teacher, Registrar, Principal and finally as Vice-Chancellor. The Andhra University had the fortune of benefiting from the services of its first three great Vice-Chancellors Dr. C.R. Reddy, Dr. S. Radhakrishnan and Dr. V.S. Krishna for a period of 34 years. Dr. K.R. Srinivasa Iyengar former Vice-Chancellor of Andhra University has observed aptly : "A success of able Vice-Chancellors – Dr. S. Radhakrishnan, Dr. C.R. Reddy, Dr. V.S. Krishna – gave definition and dynamism and a sense of direction to Andhra University. And they made it a real University not a cockpit for rival factions, fantasies and fanaticisms".

Man is Immortal

Dr. R. Kanagasabapathy, Adviser, Aditanar Educational Institution, Tiruchendur, delivered the Convocation Address at the sixteenth convocation of the Aditanar College of Arts and Science, Virapandianpatnam, Tiruchendur (Tamil Nadu). He said, " Men are mortals but man is immortal. Whatever you do to enrich yourself, you do it without disturbing the progress of civilisation – it may be the physical environment or the ethical balance or the spiritual oneness. Your interest and the interest of mankind need not be at conflict. On the other hand, while you grow, contribute to the growth of civilisation also, however small your share may be." Excerpts

....this college noted for its academic excellence, social moorings and student-oriented programmes (1979).

.... this college exists purely to provide quality education to the youth and educate them on the right principles of character and conduct (1988).

.... your College is distinguished by its search for the whole truth about nature, man and God (1991).

How is this distinction earned? "A system can work efficiently only if its constituent members are allowed to interact with one another without any pressure coming from outside the system. It is the system that assigns value-linked roles and functions to its constituent members". The traditions initiated by our illustrious founder, perpetuated by the president of the college committee with a towering personality and the tradition enthusiastically carried on by the elite staff, make the system work here and you have been fortunate in this aspect.

Having studied in a healthy institution, you should be healthy persons – physically, mentally and spiritually. The proof of the pudding is in the eating. How do we find that you have been benefited? Education is an open-ended system and there is no proper feedback to know the quality of the product.

However, in your case, the test will not be what you have achieved in this small span of time since you left the institution, but the extent to which you have developed positive reaction to the following statements:

> Nothing worthwhile is easy in this world : getting a job, creating a job, going up in the ladder of life are all difficult; but if all things are easier, there is no thrill in life. To do easy things you need not be a graduate. As Dr. Radhakrishnan puts it: if we are created automota bound to act virtuously, there is no virtue in our conduct. When it is possible for us to act wrongly, if we act rightly, there is merit. So in the difficult circumstances you achieve great things, that is success. As Victor Kiam, the man who bought the Remington company would say: "Nothing worthwhile is easy. If David would have slain a dwarf instead of a giant, who would have cared? Who would remember?"

There are many who have beaten the odds – done things which were considered impossible. Grandma Moses began painting at the age of 78 and 10 years later became one of the best-known artists in the world. When David Hartman, a blind lad wanted to become a doctor, his father said " A doctor, son? You will never know unless you try. Will you try?" Yes, he tried and became , perhaps, the first blind doctor in the world. So, try..

Happiness is definitely what one wants in life; but education teaches us that happiness cannot be pursued as such; knowledge, creation, achievements of all kinds, service, living for others and similar values are to be pursued and happiness comes as a by-product.

"In the race for quality there is no finish line." Wherever you work, whatever job you do, you create a 'pocket of excellence'. You will enjoy it.

The authors of the book "Made in Japan" (1986) while tracing the success story of Japan attribute the success to one of the most significant values concepts – *MOTTAINAI* – the expression suggests that everything in the world is a gift from the Creator and all things are provided as a sacred trust to us and that we should make the best use of everything – time, money, material – we should not waste anything.

As one who has played a role in your development in this institution, I feel confident that your over-all response to the above statements will be positive. However I have the inner feeling that there are two areas to which you should pay special attention.

The first area is : Believe in yourself, even when no one else does. Research findings have established that optimism and positive thinking and action can help one become successful. I always have a feeling that our students do not achieve what they normally could. How to develop the will-power to bring out the best in you? It is a skill that can be developed and strengthened, says a great General of the French Army. He was known for marching into the battle as the head of his troops. Asked about it, he replied: "I conduct myself like a brave man but all the time I am afraid. I don't give in to fear, but say to my body 'Tremble old carcass, but walk and my body walks". Acting as if you are strong-willed and practising it will help you be strong-willed – strong-willed enough to achieve great things and scale great heights in life.

Another area is : Flexibility – whenever change is required, you change. It may be a change of course or change of job. When necessary, be prepared to go away from the beaten track. Please remember that the world accepts changes and sometimes rewards changes. Sir J.J. Thomson was awarded the Nobel prize in 1906 for proving that electrons were particles, whereas his son Sir George Thomson received the Nobel prize in 1937 for proving that electrons are not particles, but waves.

As a general advice, kindly remember the saying : men are mortals but man is immortal.

Whatever you do to enrich yourself, you do it without disturbing the progress of civilisation – it my be the physical environment or the ethical balance or the spiritual oneness. Your interest and the interest of mankind need not be at conflict. One the other hand, while you grow, contribute to the growth of civilisation also, however small your share may be.

CALENDAR OF EVENTS

Proposed Date of the Event	Title	Objective	Name of the Organising Department	Name of the Organising Secretary/ Officer to be Contacted
December 28-30, 1992	All India English Teachers Conference	Theme: Modern Trends in English Literature and New Literatures in English	Indian Association of English Studies	Prof. K.Venkata Reddy Professor of English , Sri Krishnadevaraya University, Anantapur-515003
January 18-29 1993	Programme on Information Storage and Retrieval System	To expose participants to modern methods of information storage and retrieval	National Institute of Small Industry Extension Training (NISIET), Hyderabad	Mr. B. Sambi Reddy, Programme Director, NISIET, Yousufguda, Hyderabad-500045
May 25-27 1993	Sixth Annual Conference of the All India Association for Educational Research	Theme : Research in Educational Management	All India Association for Educational Research in collaboration with St. Ann's College of Education, Mangalore	Dr(Sister) Lydia Fernandes A.C., Principla, St. Ann's College of Education, Mangalore.
December 14-16, 1993	1993 Annual Conference of the Society for Research into Higher Education	Theme: Governments and the Higher Education Curriculum: Evolving Partnerships	Society for Research into Higher Education, London	Prof. Tony Becher, EDB, University of Sussex Falmer, Brighton BN19RG

CAMPUS NEWS

Measurement Issues in Family and Marriage

A National Seminar on "Measurement in Family and Marriage" was recently organised by the Unit for Family Studies, Tata Institute of Social Sciences, Bombay. The seminar which was conceived out of a growing realisation for focussing attention on the issue of measurement in family studies brought together researchers and practitioners from various disciplines like psychology, sociology, demography, anthropology, social work to discuss problems and issues concerning assessment of variables relevant to family and marriage.

The objectives of the seminar were: (1) To examine the status of measurement of technology in the fields of family and marriage; (2) To take an overview of the various approaches to the measurement of family and marriage variables across related disciplines and professions; (3) To discuss relevant methodological issues, problems and prospects in the assessment of family and marriage variables; (4) To examine and explore the applications and utility of measurement tools in a variety of practice settings; and (5) To provide directions for further work in measurement technology in family and marriage.

The participants discussed a variety of issues in assessment and identified problems and gaps in measurement technology. A common feeling shared by all participants was the need to upgrade family assessment techniques and to indigenise the same so as to contribute to a sound and reliable knowledge base in family studies in India.

Prof. Durganand Sinha, Nehru Prof., M.S. University of Baroda (Former Head, Department of Psychology, Allahabad University), delivered the keynote address. Prof. M.S.Gore, Former Vice-Chancellor, Bombay University, delivered the valedictory address. Prof. Meenakshi Apte and Dr. Shalini Bharat of the Unit for Family Studies were the co-ordinators. The seminar was co-sponsored by ICSSR, New Delhi and TISS, Bombay.

Biotechnology & Tissue Culture

Prof. (Dr.) P.J.C. Harris, Head of Overseas Department, The Henry Double Day Research Association, Coventry, U.K. recently visited Botany Department of the Kurukshetra University, and delivered a talk on an inter-disciplinary theme, namely, "Biotechnology and Tissue Culture." Prof. S. Arya, Vice-Chancellor, Kurukshetra University, presided.

In his lecture Dr. Harris highlighted the efforts and achievements of his research group towards the improvement of desert trees and shrubs e.g., *Atriplex*, *Parkinsonia*, *Prosopis* and *Sesbania* in third world countries like Senegal, Oman and China. According to him, tissue culture has proved to be a successful technique for micropropagation and improvement of cash crops but work with desert trees requires modified techniques and lot of hard work. He mainly dealt with *Prosopis cineraria* – a multipurpose tree of northwest Haryana and Rajasthan. He, further, dealt with the prospects of other techniques of tree-biotechnology like organogenesis, embryogenesis, protoplast fusion and genetic transformation. *Agrobacterium* mediated transformations have been successfully carried out in *Sesbania bispinosa* and this promises introduction of useful genes in forest trees.

Dr. Arya and Dr. Harris have long association and have been collaborating in various research activities relating to the collection and preservation of desert trees of Haryana and Rajasthan under research projects funded by Overseas Development Agency of United Kingdom.

Crises in Contemporary Indian Polity

A one-day Seminar on "Crises in Contemporary Indian Polity" was recently conducted by the Department of Political Science, Kurukshetra University. The seminar was inaugurated by the Vice- Chancellor, Dr. S. Arya. In his address Dr. Arya congratulated the department on the selection of the topic as only the intellectuals could properly analyse the present crises in the Indian political system and provide guidelines for solving the problems. Prof. Ranbir Singh of the Department of Political Science, Kurukshetra University welcomed the participants and highlighted the objects of the seminar.

In his keynote address Professor Randhir Singh, National Fellow, ICSSR, emphasized that there was a need to make an indepth analysis of the developments in the Indian polity since 1947. He stressed the need for bringing about changes at the structural level as the root cause of the crisis was the fact that there was "secession of the successful" from the system. Prof. Randhir Singh attributed the crises in contemporary Indian polity to the nature of state that emerged after Independence. The power was transferred to the Indian ruling class and not to the people of India. He further observed that those who gained power and position with the help of the government had come to form a separate group and did not work in the interest of the system. This led to corrupt practices, but felt that the crisis was not new. It had grown over time. He was of the view that the original Marxist model could be used to handle the crisis, so as to bridge the gap between the classes within system. But he warned that we should be wary of those who claimed to be followers of Marxism but had twisted Marxism to suit their purpose so that Marxism has become like a hat which fits the wearer. They have twisted Marxism to the extent that Marx himself would have said that "if they were Marxists then he was not."

The inaugural session of the seminar was presided over by Professor S. Kaushal, Dean, Faculty of Social Sciences while Professor C.L. Kundu, Department of Education, presided over the afternoon session.

The speakers at the seminar spoke on different aspects and institutions of the political system but all agreed on the fact that the declining economic, social and cultural standards were responsible for the present crisis in the Indian polity. In view of the papers received it was felt that the seminar should have been conducted under three sessions instead of one.

Dr. I.S. Chauhan, Chairman, Department of Political Science, proposed a vote of thanks.

About 150 teachers, research scholars and students attended the seminars.

Sambalpur University Celebrates Silver Jubilee

The Sambalpur University celebrated its Silver Jubilee by extending its activities to the farthest corner of the service area of the university from Bhawanipatna and Titilagarh on one end and Rourkela on the other. In order to integrate teaching and to make education more a teaching learning process giving lesser importance to examination, seeking co-operation of everyone rather than confrontation, the Semester Course-Credit Continuous Internal Evaluation System has been introduced as a students' welfare measure from the session 1991-92 for the postgraduate classes. As a welfare measure for the teachers, members of the supporting staff and other employees the terminal benefits of Pension Scheme has been implemented during the year.

To pay homage and respect for the great Nature Poet, Gangadhar, an annual Gangadhar Award in Poetry has been instituted on All-India basis this year. Dr. Ali Sardar Jafri, the renowned Urdu poet was the first recipient of the award carrying cash prize of Rs. 25,000/- and a citation. In memory of late Dr. Parasuram Misra, of the Classical Botanist and Educationist, who happened to be the first Vice-Chancellor of this university, a memorial lecture series in Science and Technology has been introduced. Further, in memory of the great Saint Poet Bhima Bhoi a lecture series in Humanities and Literature has been established which will be a regular feature in the years to come. The memorial lecture series was inaugurated by Shri Surendra Nath Dwivedi, Governor of Arunachal Pradesh. Dr. Sam Pitroda delivered the first Dr. Parasuram Misra Memorial Lecture on "Technology - an Agent of Change". Dr. A.S. Paintal, FRS, ex-Director General, Indian Council of Medical Research delivered the second series of lecture on "Recent Concept of Cardiac Pains". Dr. C.S. Jha, Vice- Chancellor, Banaras Hindu University delivered the third lecture in the series of Science & Technology lectures on "Role of Technology in Economic Development".

Professor K.D. Bajpai, ex-Tagore Professor of History, Sagar University delivered the first series of Bhima Bhoi Memorial Lecture on "Contribution of Kalinga to Indian Culture" and "Indian Art : A Source of Cultural Integration". Professor Chittaranjan Das, an eminent scholar and researcher spoke on the contributions of Saint Poet Bhima Bhoi. Dr. Karan Singh a great scholar, philosopher and educationist in his two lectures talked on the whole thrust of human civilization in the nuclear age and emergence of a global society.

Apart from the lecture series, Afforestation Programme in the university campus at Jyoti Vihar was taken up through plantation. Awareness programmes were initiated on the Banking system and interaction of State Bank with masses. Talks were delivered on Banking, methods of negotiation and personnel management. A two-day seminar was also organised by the Students Union of the university on Problems and Prospects of Western Orissa in which students, teachers and the public from different parts of the region participated.

A special commemorative volume entitled 'West Orissa : A Study in Ethos' was also brought out on the occasion and the same was released by Dr. Shankar Dayal Sharma, the then honourable Vice-President of India, who was the guest of honour at the closing function.

News from Agricultural Universities

Eight New Varieties of Cereal & Vegetable Crops

The Chaudhary Charan Singh Haryana Agricultural University (CCSHAU) has developed eight new high yielding and disease resistant varieties of cereal and vegetable crops. These varieties were recently released for general cultivation in Haryana. The newly developed varieties are HKR126 and HBC19 of Paddy; HHB68 of Hybrid Bajra, WH542 and WH533 of Wheat, CoH35 of Sugarcane, HRB92 of Bhindi and Hisar Arun7 and Hisar Lalit(NT8) of Tomatoes.

According to Dr. H.C. Sharma, Director Research, CCSHAU, the rice varieties HKR126 and HBC19 are disease resistant to bacterial leaf blight and can produce 80 to 85 quintals of paddy per hectare. HBC19 variety has extra long scented grain than the existing popular basmati varieties i.e. Karnal local and basmati 370. Hence this variety can be considered as one of the best rice varieties for export purposes.

HHB68 variety of Bajra, having high resistance to downy mildew matures in 60 to 65 days only. This variety is highly suitable for rainfed conditions of Haryana and other adjoining bajra growing states of north India.

The wheat variety WH-542 has been found to be highest yield variety of all wheat varieties developed so far. Whereas this variety is suitable for high input conditions, another new variety WH-533 is highly suitable for limited irrigation and fertilizer availability conditions.

The CoH-35 variety of sugarcane, a late maturing variety, has been recommended for planting in the month of April and early May. It has been found suitable for crushing from January onwards.

The Bhindi variety HRB-92, resistant to virus has been recommended as highest yielding variety suitable for cultivation in north-zone of the country. The fruits of this variety are dark green in colour and long in size. Similarly, Hisar Arun (Selection 7) is also an early maturing and high yielding variety. It matures in 60 to 65 days. The fruits of this variety are round and juicy. Hisar Lalit (NT-8) variety of Tomato is resistant to nematodes and has been found suitable for growing in the nematode areas. It yields on an average 60 quintals per hectare.

News from UGC

Countrywide Classroom Programme

Between 22nd December to 31st December, 1992 the following schedule of telecast on higher education through INSAT-ID under the auspices of the University Grants Commission will be observed. The programme is presented in two sets of one hour duration each every day from 1.00 p.m. to 2.00 p.m. and 4.00 p.m. to 5.00 p.m. The programme is available on the TV Network throughout the country.

Ist Transmission

1.00 p.m. to 2.00 p.m.

22.12.92

"Properties of Chlorides and Oxides of Period III Elements

"Children Eye Care-I : Deveopmental Disorders"

"Just 45 minutes"

23.12.92

"Fire Retardant Thatches"

"Natural Lagooning"

"History of Indian Jewellery -II"

24.12.92

"Magmatic Residues and Knowledge of Volcanoes "

"Understanding Shelley-II Ode to the West Wind"

"Modern Telugu Poetry : An Introduction"

25.12.92

No Telecast

26.12.92

"Adventures in Misty Heights"

"Islamic Calligraphy Through the Ages-I"

"Week Ahead"

27.12.92

No Telecast

28.12.92

"The Lissjous Figures"

"A Sequel to Reform"

"Techni ques of Demand Forecasting-II"

29.12.92

"The Transition Metals"

"Children Eye Care-II"

"AIDS"

30.12.92

"Muddle Fuddle"

"The Precious Casket"

"The Rhineland Cultural Scene"

31.12.92

"The Pursuit"

"Yours Sincerely"

IInd Transmission

4.00 p.m. to 5.00 p.m.

22.12.92

"Using the Heat of Combustion Apparatus (Glass)"

"Innovation: Diabetes – The Quiet Killer"

"Educational Technology – An Overview"

23.12.92

"Cactus – A Beautiful Bramble"

"Bonn – 2000 Years Young"

24.12.92

"Buried Treasure : Out of the Rock"

"Nissim Ezekiel – Poet Rascal Clown"

25.12.92

No Telecast

26.12.92

"Nrityaganga – V.Aesthetics of Music for Dance"

"Language of the Mute"

"Week Ahead"

27.12.92

No Telecast

28.12.92

"Microwaves"

"New Genetic Tool for the Improvement of Species"

"Capital Budgeting"

29.12.92

"Instrumental Techniques"

"Take Care It's Your Heart"

30.12.92

"Electrical Power"

"Getting Ready for Magnification-I"

"Pigments and Dyes"

31.12.92

"The Pursuit"

"Yours Sincerely"

News from Abroad

Computer Integrated Manufacturing Center

The Kyyiv Polytechnic Institute (KPI), Ukraine and a world known IBM corporation have established, the first in the Ukraine as well as in the Eastern Europe, Computer Integrated Manufacturing Center (CIM - Center). New Information Technologies, and CIM are essential elements to support Economic Renaissance, leading to considerable industrial control and infrastructure development, production efficiency, productivity improvement and products quality improvement. The established Center will contribute much to implement CIM concepts in the Ukrainian industry.

The CIM Center will cover different aspects, such as :

– expert activities in CIM (Computer Integrated Manufacturing) and in the application of the New Information Technologies in the Industrial sector;

– developing and running retraining courses for the Engineering Community in CIM and in other Information Technologies;

– facilitate the inclusion of CIM education in the curriculum of the KPI;

– act as a consultant for Industries willing to implement that CIM concept and applications;

– expert activities in modern software;

– exchange information, experience and work with Scientific community all over the world;

– organizing and running courses for foreign students in the CAD/CIM area;

– scientific research in CIM, CAD and New Information Technologies.

CIM Center Hardware and Software configuration allows to distributively process large volumes of graphic and textual information and is a base to implement CIM-concepts.

The main advantage of CIM-Center hardware is its construction as a computer network with a central computer ES/9000 mod. 150 (VM/ESA operating system) to which a local network based on RISC/6000 File Server mod. 52H and six RISC/6000, mod. 320 Working Stations (AIX operating system) are attached.

The applied Software CATIA (Computer-graphics Aided Three-Dimensional Interactive Application) include Computer-aided Design (CAD), Computer-aided Manufacturing (CAM) and Computer-aided Engineering(CAE) facilities.

MoU between COL and ICDE

The Commonwealth of Learning (COL) has entered into a partnership with International Council for Distance Education (ICDE) to organise and conduct a series of research projects relating to distance education.

A Memorandum of Understanding was signed at the 16th World Conference of ICDE held at Sukhothai Thammathirat Open University (Thailand) from November 8 to 13, 1992 by the ICDE President, Ms. Marian Croft, and the President of COL, Prof. James A. Maraj. Specific research pro-posals are being developed and coordinated by Dr. Ian Mugridge who has responsibility for research within ICDE's executive. Dr. Mugridge is attached to COL on a part-time basis. Ms. Croft is Director of the Centre for Continuing Education at Laurentian University (Ontario, Canada) and Dr. Mugridge is Principal of the Open University (British Columbia, Canada).

An ICDE Conference "Crackerbarrel" session was organised and sponsored by The Commonwealth of Learning. The themes for the session were :

* Distance education in the developing world
* Research and development
* Development of distance education materials
* Applications of technology
* Planning for the future

Also, during the Thailand Conference, COL, held a reception hosted by Mr. Don Hamilton, Vice Chairman of COL's Board of Governors, and Professor James A. Maraj, President and Chief Executive Officer of COL. The occasion provided an opportunity for Commonwealth distance educators to meet and to be provided with an update on The Commonwealth of Learning's various activities.

Taking advantage of experts gathered at the ICDE Conference, COL recorded interviews and discussions on specific topics, including:

* Educational reform with particular reference to distance education
* Applications of communications technology in distance education
* Teaching of science, maths and technology through distance education
* Increasing educational opportunities for women: the role of distance education.
* Priorities in research and evaluation in distance education.

The recorded material will be used to develop broadcast quality videos for a variety of uses in distance education throughout the world.

British Council Seminars

The British Council in the United Kingdom hosts 60 one-to-three-week specialised courses and seminars annually, including 14 summer schools for teachers of English. Each programme is directed by a distinguished British specialist with a team of experts and practitioners.

The participants are senior or established specialists drawn from many professional and academic disciplines.

The aim of the course or seminar is to introduce participants to the very latest developments in their fields, both in Britain and elsewhere, and to share and exchange information at a high level.

Two seminars of special interest to educationists that are to be held in 1993 are "Management in Universities – an International Seminar" and "Financial and Resource Management in Higher Education".

The objective of "Management in Universities" is to consider the pressures for change on Universities and other institutions. It is designed for those members of universities and similar institutions of higher education who are involved in management – Vice-Chancellors, Pro- Vice-Chancellors, Deans of Faculties, Chief Administrative Officers – and for senior officials in other agencies concerned with higher education such as national ministries, local or regional government.

The seminar on "Financial and Resource Management in Higher Education" will examine the practices, management and techniques of resources allocation and income generation, especially within universities. It is aimed at senior academic and administrative staff in universities and other institutions of higher education with responsibility for resource management.

These are both self financing courses and applicants will need to find funding for both the courses and international travel.

Further details can be obtained from The British High Commission, British Council Division, 17 Kasturba Gandhi Marg, New Delhi- 110001.

Communication

Empowerment of Women

Reference Professor G. Ram Reddy's Convocation Address at the Avinashilingam Institute of Home Science and Higher Education for Women at Coimbatore published in the *University News* of 16 November 1992.

Kerala's successful literacy campaign with a bottom-up interpersonal and small group approach of communication coupled with folk and traditional media, has achieved 100% literacy. Even the post-literacy evaluation has confirmed the total literacy in Kerala. Therefore the female literacy in Kerala is not 87% but 100%.

If we take a holistic view of women's empowerment, realities would not be subdued with illusions. Sexual terrorism at workplace, psychological and structural factors making women weak, discriminatory family laws, segregation and isolation, gender relations among men and women in a patriarchal society, ill health – both physical and mental – of women due to social taboos, unanticipated life crises due to infertility, cross-generational continuity of discrimination, unpaid women's work, family violence, gendered wage gap, etc are various issues embedded in our Indian society which make women's role subservient to men.

Therefore while women's education will make the desired effect, admiration like यत्र नार्यस्तु पूजयन्ति, रमन्ते तत्र देवता is also stereotype approach to raise women's status in the society. More than 'Women's studies', perhaps 'men's studies' is needed so that cultural and behavioral dimensions of masculinity can be controlled in line with male- female equality.

L.N.Mittal, Principal,
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THESES OF THE MONTH

A list of Doctoral Theses accepted by Indian Universities

PHYSICAL SCIENCES

Mathematics

1. Gupta, Dilip Kumar. **A study of the role of various confractive type mapping in fixed point theory.** HS Gour. Dr R K Namdeo, Department of Mathematics, Dr Hari Singh Gour Vishwavidyalaya, Sagar.

2. Janakiraman, T N. **On some eccentricity properties of the graphs.** Madras.

3. Kumaresan, K. **Contributions to the study of gamma- semigroups.** Madras.

4. Moorthy, M B K. **Some problems on convection heat transfer.** Anna.

5. Sharma, Narayan Datt. **Some flow and instability problems.** HP.

6. Sreeram Reddy, K. **Study of incompressible gas-particle flows through numerical techniques over heated horizontal and vertical plates.** Osmania.

7. Tamba, Manvendra Manohar Prabhu. **Contribution to the structure of certain standard modules of affine Lie algebras and Rogers-Ramanujan identities.** Madras.

8. Vijayaraju, P. **Studies on fixed points for asymptotically nonexpansive and other types of mappings.** Anna.

Statistics

1. Jain, Madhu Bala. **Non parametric methods in life testing and reliability.** Delhi.

Physics

1. Bahuguna, Bimal Prakash. **Theory of impurity modes.** Garhwal. Dr B D Indu, Department of Physics, B C College, Srinagar.

2. Balakrishnan, K. **Growth of some II-VI and I-III-VI compound semiconductors and MoTe by chemical vapour transport and their characterization.** Anna.

3. Bhatt, Jitesh Rajnikant. **Non-linear waves in quark-gluon plasma.** Baroda.

4. Bisen, Durga Prasad. **Studies on the mechano-luminescence of certain ferroelectric crystals.** Durgawati. Prof B P Chandra, Department of Physics, Rani Durgawati Vishwavidyalaya, Jabalpur and Dr M H Ansari, Reader, Department of Physics, Rani Durgawati Vishwavidyalaya, Jabalpur.

5. Chandra, Badri Prasad. **Studies on the characteristics and mechanism of mechanoluminescence in organic and inorganic crystals.** D.Sc. Durgawati. Dr S C Dutt, Prof and Head, Department of Physics, Rani Durgawati Vishwavidyalaya, Jabalpur.

6. Darshan, V P. **Study of alpha induced stripping reactions of Si at 45 Mev and spectroscopic strength for the states in mirror nuclei Si and P. Bangalore. Dr N G Puttaswamy, Department of Physics, Bangalore University, Bangalore and Prof M P Sathyavathiamma, Department of Physics, Bangalore University, Bangalore.**

7. Kuldip Singh. **Measurement and analysis of flourescent X-ray production cross sections using energy dispersive detectors.** Punjabi. Dr K L Allawadhi, Reader, Department of Physics, Punjabi University, Patiala and Prof B S Sood, Department of Physics, Punjabi University, Patiala.

8. Paul, Rashmi. **Solar wind interaction at Venus: Effects on dayside electron, ion and neutral temperatures.** Delhi.

9. Tyagi, Ajit Prasad. **On certain aspects of numerical weather prediction over India: Planetory boundary layer studies.** Berhampur. Dr U C Mohanty, Principal Scientific Officer, Centre for Atmospheric Sciences, Indian Institute of Technology, Delhi.

Chemistry

1. Agrawal, Ravi. **Kinetic studies on anionic inhibition of thiosulphate reactivity.** Durgawati. Dr K K Mishra, Department of Chemistry, Rani Durgawati Vishwavidyalaya, Jabalpur.

2. Bandyopadhyay, Susmita. **Studies on the kinetics and mechanism of metal-hydroxamate interaction and metalloporphyrin formation.** Calcutta.

3. Bhavsar, Rajuprasad Shriram. **Development of new semiconducting materials based on lithium containing molybdates and tungstates for photoelectrochemical (PEC) solar cells.** Nagpur. Dr R B Kharat, Department of Chemistry, Institute of Science, Nagpur.

4. Channegowda, C. **Analytical and kinetic investigations with 1-chlorobenzotriazole.** Bangalore. Prof S M Mayanna, Department of Chemistry, Central College, Bangalore.

5. Dileep Kumar, Saridi Madhava. **Metabolites of marine organisms: New polyhydroxy steroids and diterpenes from two Alcyonaceans of the Andaman and Nicobar Islands.** Andhra.

6. Guchhait, Sukumar. **Kinetics and mechanism of the aqueous and emulsion polymerization of vinyl monomer (methacrylonitrile).** Burdwan. Prof Ranjit Singh Konar, Department of Chemistry, Regional Engineering College, Durgapur.

7. Gupta, T C S M. **Studies on transport of hydrocarbons through liquid surfactant membranes.** Garhwal. Dr B B Raizada, Department of Chemistry, D B S College, Dehradun.

8. Hariharan, M. **Studies on some aspects of metal borides.** Alagappa.

9. Hastak, Bhavana Shashikant. **Synthesis in small ring heterocycles.** Nagpur. Dr B Ghiya, Department of Chemistry, Institute of Science, Nagpur.

10. Hazra, Biren. **Topology and quantum mechanical quantities in the correlations of some molecular properties.** Burdwan. Prof Sisir Ch Rakshit (Retd), Department of Chemistry, University of Burdwan, Burdwan.

11. Jadhao, Dasharath Baliram. **Synthesis of newer types of nucleosides and their phosphorylation reactions.** Nagpur. Dr M G Paranjpe, Department of Chemistry, Nagpur University, Nagpur.

12. Kalambe, Chandrashekhar Pundlikrao. **Coordination polymers synthesis and structural studies.** Nagpur. Dr N S Bhave, Department of Chemistry, Nagpur University, Nagpur.

13. Kalyani, R. **Oxidative hydrolysis by potassium bromate and manganese (III) acetate: Kinetics and mechanistic aspects.** Madras.

14. Kamaraj, P. **Studies on the removal of heavy metals from industrial effluents by sulphide precipitation process.** Anna.

15. Khan, Khan Munifuddin. **Physicochemical and engineering properties of some treated soils.** AMU. Dr Iqbal A Khan, Reader, Department of Chemistry, Aligarh Muslim University, Aligarh.

16. Koshy, Alex T. **Studies on blends of natural rubber and ethylene-vinyl acetate with special reference to effects of cross linking system.** Mahatma Gandhi. Dr Sabu Thomas, Lecturer, School of Chemical Sciences, Mahatma Gandhi University, Kottayam and Dr Baby Kuriakose, Deputy Director, Rubber Research Institute of India, Kottayam.

17. Meet Mohan Singh. **Studies on polymer-anchored ligands, coordination complexes.** Kurukshetra.

18. Mehta, Girish Dineshchandra. **Synthesis of potential liquid crystals and investigations of their physical properties.** Baroda.

19. Mudgal, Geetesh. **Chemical investigations in alicyclic systems with special reference to steroids.** AMU. Dr M Mushfiq,

Reader, Department of Chemistry, Aligarh Muslim University, Aligarh.

20. Mukherji, A N. **Studies on galvanic corrosion of metals in aqueous environment.** ISM. Prof P Bandopadhyay, Department of Fuel and Mineral Engineering, Indian School of Mines, Dhanbad and Dr P Prabhakaram, National Metallurgical Laboratory, Jamshedpur.

21. Nagarajan, K. **Calorimetric studies on some alloys of interest in nuclear technology.** Madras.

22. Paichha, Ramesh Chandra. **Mechanistic studies in per acid oxidation.** Berhampur. Prof G P Panigrahi, Department of Chemistry, Berhampur University, Berhampur.

23. Prashant, A. **Phytochemical investigation of Tephrosia villosa and synthesis of pyrono and 1,5-Dioxano-coumarins of biological interest.** Osmania.

24. Pushpa Devi. **Transport properties of non-aqueous electrolyte solutions.** HP.

25. Qureshi, Mohammad Aslam. **Studies on the interactions of some pollutants with soils and crops.** AMU. Dr Samiullah Khan.

26. Rambhupal Reddy, R. **Synthesis of some 1,2-and 1,8-hetero-fused naphthalenes.** Osmania.

27. Sachin Kumar. **Study of petrocrops as a source of liquid fuels.** Garhwal. Dr V K Bhatia, Indian Institute of Petroleum, Dehradun.

28. Samanta, Tapas. **Studies on the membrane phenomena under equilibrium and non-equilibrium conditions.** Burdwan. Prof Arun Sankar Basu, Department of Chemistry, University of Burdwan, Burdwan.

29. Sankaranarayanan, T S N. **Studies on the influence of detergent type amines and their dithiocarbamates on zinc phosphate coatings on mild steel.** Madras.

30. Shailaja, G. **Synthesis of some bioactive benzotriazepine, benzoxadiazepine and quinazolinotriazine derivatives.** Osmania.

31. Shanmugasundaram, S. **Studies in alkaloid chemistry.** Madras.

32. Siddalinga Murthy, K R. **Studies on esterases of the silkworm, Bombyx mori, L.** Bangalore. Dr P S Veerabhadrappa, Chairman, Department of Chemistry, Central College, Bangalore and Dr A R Kasturi Bai, Director (Sericulture), Government of Karnataka, Bangalore.

33. Siva Naga Raju, Kalidindi Sri Hari. **Metabolites of marine organisms: Chemical constituents of some species of Porifera of the Indian Ocean.** Andhra.

34. Sreenivasa Rao, Damarla. **Metabolites of marine organisms: New steroidal glycosides and diterpenoids from two species of Alcyconacea of the Andaman and Nicobar Islands.** Andhra.

35. Surender Singh. **Studies on the constituents of the bones of Indian murrah buffalo, Bubalus bubalis L.** Durgawati. Dr R K Bajpai, Govt Engineering College, Jabalpur.

36. Tripathi, Brajesh Kumar. **Determination of some metals after separation of their complexes with napthalene.** Devi Ahilya. Dr Ashok Kumar, Department of Chemistry, Devi Ahilya Vishwavidyalaya, Indore.

37. Vishwanathan, Radhakrishnan. **Studies on binary systems of tellurium with chromium and molybdenum by using Knudeen effusion mass spectrometry.** Madras.

Earth Sciences

1. Dubey, Nishith. **Geological resource evaluation studies of Damoh region for regional rural planning and development using remote sensing techniques.** HS Gour. Dr R K Trivedi, Department of Applied Geology, Dr Hari Singh Gour Vishwavidyalaya, Sagar.

2. Khan, Dabeer Ahmad. **Cretaceous sedimentary facies of Narmada Basin with special reference to carbonate rocks, Zeerabad - Jobat Area, M P.** AMU. Dr Khurshed Akhtar, Reader, Department of Geology, Aligarh Muslim University, Aligarh.

3. Mohabey, Dhananjay Mahendrakumar. **Palaeontological studies of the lameta formation with special reference to dinosaurian eggs from Kheda and Panchmahals Districts of Gujarat, India.** Nagpur. Dr P M Tapaswi, Department of Geology, Nagpur University, Nagpur.

4. Padhy, Pravat Kumar. **Drainage basin analysis of the Ajay River.** ISM. Prof S Basumallick, Department of Applied Geology, Indian School of Mines, Dhanbad and Dr R Bastia, Oil and Natural Gas Commission, Dehradun.

5. Rajarathnam, S. **Comparative study of coal characteristics between Foreland Shelf coal and Schuppen Belt coal in North-Eastern India and its bearing on hydrocarbon occurrences.** ISM. Prof D Chandra, Indian School of Mines, Dhanbad and Dr G K Handique, Oil India Limited, Assam.

6. Ramachandran, Tirupapuliyur Venkataraman. **Regional geologcial study of the granulitic belt of South India using multi-theme data.** Andhra.

7. Rawat, Rajendra Kumar. **Landslides investigation in Sikkim Region, North Eastern Himalaya.** ISM. Prof V D Choubey, Department of Applied Geology, Indian School of Mines, Dhanbad.

8. Zafar Husain. **Geology, geochemistry of phosphatic rocks around Mardeora-Hirapur area in Chhatarpur and Sagar Districts, M P.** AMU. Dr S H Israili, Prof, Department of Geology, Aligarh Muslim University, Aligarh.

Engineering & Technology

1. Babu Anto, P. **Speaker identification using models for phonemes.** CUST. Dr C S Sridhar, Prof, Department of Electronics, Cochin University of Science and Technology, Kochi.

2. Baldev Singh. **Beneficiation and processing of montmorillonite type of clays and their application as catalyst for organic chemical transformation.** ISM. Prof P Bandopadhyay, Department of Fuel and Mineral Engineering, Indian School of Mines, Dhanbad and Dr S K Roy, Central Fuel Research Institute, Dhanbad.

3. Bhatia, Jamila. **Studies on degradation of high polymer and its prevention.** Delhi.

4. Chetty, Madhusudhan Rajgopal. **Some studies in analysis and control of subsynchronous resonance phenomena in series compensated power system.** Nagpur. Dr M U Deshpande, Department of Electrical Engineering, Visveswaraiya Regional College of Engineering, Nagpur.

5. Deshmukh, Mukund Keshavrao. **Effect of passive features on comfort conditions in buildings.** IIT Delhi. Prof M S Sodha, Devi Ahilya Vishwavidyalaya, Indore; Dr R L Sawhney, M L N College, University of Delhi, Delhi and Prof D P Tewari, Department of Physics, Indian Institute of Technology, New Delhi.

6. Kalantar, Mohsen. **Digital simulation of wind stand-alone and wind diesel isolated power systems.** IIT Delhi. Prof S C Tripathy, Centre for Energy Studies, Indian Institute of Technology, New Delhi and Dr R Balasubramanian, Centre for Energy Studies, Indian Institute of Technology, New Delhi.

7. Kalliyana Krishnan, V. **Studies on the radiation grafting of hydrophilic monomers onto plasticized poly (vinyl chloride) to prevent plasticizer migration.** Chitra Tirunal. Dr Joseph Francis, Prof and Head, Department of Polymer Science and Rubber Technology, Cochin University of Science and Technology, Kochi.

8. Nandy, Tapas. **Studies on anaerobic attached film fixed bed reactor system for the treatment of pharmaceutical waste water.** Nagpur. Dr S N Kaul, Waste Water Engineering Division, National Environmental Engineering Research Institute, Nagpur.

9. Samdarshi, Sanjoy Kumar. **Study of top heat loss factor of flat plate solar collector.** IIT Delhi. Prof S C Mullick, Centre for Energy Studies, Indian Institute of Technology, New Delhi.

10. Samuel, A. **Heat and mass transfer studies on the three phase fluidized bed dehumidification system.** Anna.

11. Shanmugam, J. **Some studies on adaptive finite data window identification algorithms and some of their applications.** Anna.

12. Sivaprakasam, Sushama. **A new approach to EMG control of functional electrical stimulator.** Anna.

13. Srihari, T. **Submerged arc welding of high strength low alloy steels.** IIT Delhi. Dr R S Parmar, Department of Mechanical Engineering, Indian Institute of Technology, Delhi.

14. Subba Raju, Rudraraju Venkata. **Ionic mass transfer in gas-liquid solid fluidized beds for cross and annular flow of electrolyte.** Andhra.

15. Suresh, Nikkam. **Modelling and performance studies on water only cyclone treating coal.** ISM. Late Dr M Vanangamudi.

16. Venkateswara Rao, Malapati. **Laminar flow analytical momentum and heat transfer studies in concentric equilateral triangular annular channels and experimental studies in short passages.** Andhra.

BIOLOGICAL SCIENCES

Marine Sciences

1. Gopakumar, G. **Studies on the effect of hydrogen sulphide on the penaeid prawns of Kayamkulam Lake, South West Coast of India.** CUST. Dr V J Kuttyamma, Reader, School of Marine Sciences, Cochin University of Science and Technology, Kochi.

2. Nayak, Lakshman. **Studies on the seasonal distribution of abundance of the post larvae of penaeid prawns in relation to biological and physico-chemical factors at Rushikulya Estuary.** Berhampur. Dr P M Mishra, Prof, Department of Marine Sciences, Berhampur University, Berhampur.

3. Vara Prasada Rao, Petety Venkata Subrahmanya. **Systematics and some aspects of biology of the fishes of genus, Dussumieria (Clupeidae: Dussumieriinae) off Andhra Pradesh Coast, India.** Andhra.

Biochemistry

1. Chakravarthy, Taraknath. **Mechanism of light stimulation of glyoxalase-I and cell proliferation and studies on in vitro regeneration in** Amaranthus paniculatus. JNU. Prof S K Sopory, School of Life Sciences, Jawaharlal Nehru University, New Delhi.

2. Jagdeep Singh. **Regulation of carbohydrate metabolism in germinating chickpea under water stress.** PAU.

3. Jayanthi, L D. **Acetylcholinesterase: Studies on acetylcholinesterase from monkey-diaphragm and basal ganglia and from human amniotic fluid.** Madras.

4. Kannapiran, M. **Biochemical and immunological functions of macrophages in experimental mycobacterial infections in mice.** Madras.

5. Kumar, K. **Plasma lipid alterations and related biochemical studies in mammary gland tumour.** Madras.

6. Mohammad Noor Alam. **Role of medial and lateral preoptic areas on sleep-wakefulness-body temperature and involvement of alpha adrenergic mechanism.** JNU. Dr B N Mallick, Asstt Prof, School of Life Sciences, Jawaharlal Nehru University, New Delhi.

7. Pandey, Siyaram. **Protein transport into the nucleus.** JNU. Dr Veena K Parnaik.

8. Ravichandran, L V. **Biochemical studies on the connective tissue metabolism and the role of lysosomal enzymes in isoproterenol induced myocardial infarction.** Madras.

9. Zanwar, Prakash Harikisanji. **Studies on microbial toxic metabolites.** Nagpur. Dr N V Shastri, Reader, Department of Biochemistry, Nagpur University, Nagpur.

Botany

1. Abdel Gadir, Abdel Gadir El-Fadil. **Microbiological studies on atmosphere with particular reference to influence of meteorological factorson air-spora and pollen allergy.** Bangalore. Dr Shripad N Agashe, Prof and Chairman, Department of Botany, Bangalore University, Bangalore.

2. Abraham, K. **Studies on the sexual potentiality of greater yam,** Dioscorea alata L. Kerala. Dr P Gopinathan Nair, Reader, Department of Botany, University of Kerala, Kariavattom.

3. Anna Mani, B. **Foliar architecture in dicotyledonous flora of Visakhapatnam.** Osmania.

4. Bisht, Madho Singh. **Genome organisation and evolution in genus** Vicia. Delhi.

5. Das, Pradeep Kumar. **Flora of North-East Koraput District, Orissa.** Berhampur. Dr M K Mishra, Lecturer, Department of Botany, Berhampur University, Berhampur.

6. Gunasekaran, S. **Mangrove ecosystem of Muthupet, Tamil Nadu and its environmental characteristics.** Madras.

7. Kapoor, Sanjay. **Characterization and expression of chloroplast-encoded genes related to photosynthesis in rice,** Oryza sativa L subsp indica. Delhi.

8. Mathivanan, K. **Studies on the effect of methyl isocyanate on the physiology of cotton,** Gossypium hirsutum **and soybean,** Glycine max. Madras.

9. Medda, Raghunath. **Biodegradation of some economic timbers of wood-rotting fungi and their preservation.** Burdwan. Prof Balen Nandi, Department of Botany, University of Burdwan, Burdwan.

10. Narasimhan, D. **A floristic study of the flowering plants of Chengalpattu District, Tamil Nadu.** Madras.

11. Nayar, Jyothi. **Studies on the aerospora of a semi-urban area in the vicinity of Secunderabad, A P.** Osmania.

12. Pandit, M K. **Conservation biology of** Coptis teeta Wall **(Ranunculaceae).** Delhi.

13. Patel, Tushar Kiritkumar. **Biochemical and calorific aspects of hardwood.** Patel. Dr J D Patel, Prof, Department of Biosciences, Sardar Patel University, Vallabh Vidyanagar.

14. Pradhan, Shirish Vasant. **Physiological studies on accumulation of heavy metals by cyanobacteria.** Nagpur. Dr P B Nandkar, Department of Botany, Nagpur University, Nagpur.

15. Rajyalakshmi, K. **Studies on in vitro regeneration, transient gene expression and molecular biology of somatic embryogenesis in wheat,** Triticum aestivum L. Delhi.

16. Rathore, Devendra Singh. **Microbial deterioration of leather in industries of Gwalior.** Jiwaji. Dr (Smt) S Chauhan, Reader, Department of Botany, Jiwaji University, Gwalior.

17. Sakhuja, Saloni. **Plant surface fungi in relation to soil fertility and biological control.** Delhi.

18. Sarkar, Krishnendu. **Flora of West Champaran, Bihar.** Burdwan. Sri Prasanta Kumar Bhattacharyya, Reader, Department of Botany, University of Burdwan, Burdwan.

19. Singh, Harish. **Ethnobotanical studies of the Boxa tribe of Nainital District, U P.** Garhwal. Dr J K Maheshwari, National Botanical Research Institute, Lucknow.

20. Sudhakar, Sanamandra. **Ecological studies on some Ceramiales (Rhodophyceae) of the Visakhapatnam Coast.** Andhra.

21. Tah, Jagatpati. **Studies on the response of genes and genotypes to the fluctuating environments and adoptation of the legume,** Dolichos biflorus L. Burdwan. Sri Paragranjan Dasgupta, Reader, Department of Botany, University of Burdwan, Burdwan.

22. Thayasing, G Earnest. **Cytogenetic morphological and phylogenetic studies on some grasses of the tribes** Andropogoneae **and Maydeae.** Kerala. Dr J Christopher, Prof, Department of Botany, University of Kerala, Kariavattom.

Agriculture

1. Chimanshette, Tanaji Govindrao. **Response of Sesamum,** Sesamum indicum L **varieties to varying dates of sowing and plant densities in Kharif season.** Marathwada Agrl. Dr M V Dhoble, Director, Central Farm, Marathwada Agricultural University, Parbhani.

2. Onkar Singh. **Seed viability, vigour and genetics of speed of germination in chickpea,** Cicer arietinum L. HAU.

3. Pandey, Narbdeshwar. **Heterosis studies in early and late maturing hybrids of pigeonpea,** Cajanus cajan L. Rajendra Agrl.

4. Patil, Babasaheb Ravasaheb. **Studies on the biophysical and biochemical factors associated with resistance to the shoot and fruit borer,** Leucinodes orbonalis Guen **in brinjal,** Solanum melongena L. MP Krishi. Dr D S Ajri, Director of Research, Mahatma Phule Krishi Vidyapeeth, Rahuri.

5. Patil, Yuvaraj Motiram. **Dynamics of potassium in swell-shrink soils of Maharashtra.** MP Krishi. Dr K R Sonar.

6. Ravinder Nath. **Bioefficacy and residue dynamics of some insecticides against insect pests of** Abelmoschus esculentus (L) **Moench.** YS Parmar. Dr Amit Nath, Department of Entomology and Apiculture, College of Horticulture, Nauni.

7. Sanjay Kumar. **Comparative efficiency of lime and gypsum in ameliorating an acid alfisol with special reference to phosphorus availability.** HP Krishi. Dr T S Verma.

8. Shashi Kumar. **Effects of paclobutrazol, deminozide and rootstocks in the growth and chemical composition of apple plants.** YS Parmar. Dr K K Jindal, Assoc Director of Research, Regional Horticultural Research Station, Mashobra, Shimla.

9. Singh, Prabhakar Kumar. **Identification of heterotic combinations and transfer of cytosterility in rice,** Oryza sativa L. Rajendra Agrl.

10. Sohu, Rabinder Singh. **Genetic progress from one cycle of selection for yield and earliness in two crosses of upland cotton.** PAU.

Zoology

1. Babu, A. **Biotechnological studies on some phytophagous and predatory coccinellids** (Coccinellidae: Coleoptera: Insecta). Madras.

2. Bakshi, Neena. **Biology and ecological studies of** Solenopsis gominata **Fabr. (Hymenoptera: Formicidae).** Garhwal. Dr S K Sangal, Department of Zoology, D A V College, Dehradun.

3. Boral, Asok Kumar. **Some surface ultrastructural, histochemical and biochemical studies on** Ceyloncotyle scoliocoelium **(Trematoda).** Burdwan. Prof Giridhari Majumdar, Department of Zoology, University of Burdwan, Burdwan.

4. Chaturvedi, Usha. **Changes induced by Aziridine compounds in some insect tissues with special reference to cuticle, haemogram and gut.** HS Gour. Prof Y N Sahai, Department of Zoology, Dr Hari Singh Gour Vishwavidyalaya, Sagar.

5. Choudhury, Kamal. **Some aspect of endogenous implications during development in two Agrotis species under certain geological conditions.** Gauhati. Prof Hari Chandra Mahanta, Department of Zoology, Gauhati University, Guwahati.

6. Dey, Mamata. **Cytological studies on the pineal-gonadal interactions in male rose ringed parakeet under natural and experimental conditions.** Burdwan. Dr Soumen Kumar Maitra, Senior Lecturer, Department of Zoology, University of Burdwan, Burdwan.

7. Indira, R S. **Environmental perception of Kapaleswarar Temple.** Madras.

8. Jose Kumar, V S. **Action of adrenal and pancreatic hormones on certain enzymes of energy metabolism in Caecilian,** Gegenophis carnosus **Beddome.** Kerala. Dr Oommen V Oommen, Reader, Department of Zoology, University of Kerala, Kariavattom.

9. Karunakaran, V C. **Chlorpyrifos, an organophosphate, induced changes in neuro-transmitters and effect of drug challenge on their interrelationships in rat brain.** Madras.

10. Kohli, Surinder. **Studies on different techniques for differentiating** Schistosome cercariae **prevalent in and around Jabalpur.** Durgawati. Dr M C Agarwal, College of Veterinary Science and Animal Husbandry, Jabalpur.

11. Konar, Mitali. **Epidemiology of ascariasis in Durgapur industrial belt including the study of nutritional status of the host.** Burdwan. Prof Giridhari Majumdar, Department of Zoology, University of Burdwan, Burdwan and Prof Chittaranjan Maitty, Department of Biochemistry, Burdwan Medical College, Burdwan.

12. Koppar, Bheemasenachar. **Studies on some selected freshwater animals in relation to pesticide toxicity.** Gulbarga. Dr R S Kulkarni, Department of Zoology, Gulbarga University, Gulbarga.

13. Munirathinam, S. **Bio-ecological studies of** Tricentrus albamaculatus **Ananthasubramanian and Ananthakrishnan (Homoptera: Membracidae).** Madras.

14. Murugesh, Meenakashi. **Studies on the helminth parasites of scombroid fishes from the Visakhapatnam Coast, Bay of Bengal.** Andhra.

15. Prasadan, P K. **Systematics and biology of cephaline gregarines from some arthropods in Kerala, India.** Calicut. Dr K P Janardanan, Department of Zoology, University of Calicut, Calicut.

16. Radha, R. **Restriction fragment length polymorphism haplotypes of beta thalassaemia in Tamil Nadu.** Madras.

17. Rahmathulla, V K. **Studies on the geometrid fauna (Insecta:Lepidoptera) of Kerala.** Calicut. Dr George Mathew, Division of Entomology, Kerala Forest Research Institute, Peechi, Trichur.

18. Rajagopal, S. **Biofouling problems in the condenser cooling circuit of a coastal power station with special reference to green mussel,** Perna viridis L. Madras.

19. Sarkar, Prasanta Kumar. **Morphological, histological and histochemical observations of male internal reproductive organs of** Aspidomorpha miliaris F **and** Aulocophora lewissi **Baly.** Burdwan. Dr Mohitosh Bandyopadhyaya, Reader, Department of Botany, University of Burdwan, Burdwan.

20. Thomas, Lali. **Chemosterilant induced changes in the reproductive organs of** Poekilocerus pictus **Fabr (Orthoptera: Acrididae).** HS Gour. Prof Y N Sahai, Department of Zoology, Dr Hari Singh Gour Vishwavidyalaya, Sagar.

21. Vattakaril, Sunny Augustine. **Studies on macrozoobenthic populations and their utility as pollution indicators with special reference to industrial effluents at Dewas.** Devi Ahilya. Dr A P Diwan, Department of Zoology, Govt Post Graduate College, Mahu.

Medical Sciences

1. Annapurna, Akula. **Studies on drug release and permeability of ethyl cellulose microcapsules prepared by coacervation and complex emulsion methods and in** vitro **and in** vivo **evaluation of tolbutamide microcapsules for controlled drug release.** Andhra.

2. Herbert, G Daniel. **Antigenic cross reactivity in mycobacteria and its relevance to immune response in experimental systems and in humans.** Madras.

3. Katare, O P. **Studies on target oriented liposomal formulations of some drugs.** HS Gour. Prof V K Dixit, Department of Pharmaceutical Sciences, Dr Hari Singh Gour Vishwavidyalaya, Sagar and Dr S P Vyas, Lecturer, Department of Pharmaceutical Sciences, Dr Hari Singh Gour Vishwavidyalaya, Sagar.

4. Koicha, Morris. **Study of T-lymphocyte functions in patients with acute rheumatic fever and rheumatic heart disease.** PGI.

5. Mandal, Anindita. **Physical performance level of Indian (Easter region) school going boys.** Calcutta.

6. Pal, Amit. **Studies on cell-associated and cell-free toxins in** Shigella Spp., Salmonella typhimurium, **diarrhoeagenic** Escherichia coli, Vibrio spp **and** Aeromonas spp **isolated from clinical cases in Calcutta, India.** Calcutta.

7. Ratnakar, P. **Biochemical studies on** Allium sativum Linn **(garlic).** Delhi.

8. Sampath Kumar, M Mohan. **Clinical and electro-physiological studies on the human dentate nucleus using stereotactically implanted depth electrodes.** Madras.

Animal Husbandry

1. Shinde, Sambhaji Baburao. **Studies on development of rumen in lambs.** MP Krishi. **Dr I G Chavan, Head (Retd), Department of Animal and Dairy Science, Mahatma Phule Krishi Vishwavidyalaya, Rahuri.**

2. Singh, Pardeep. **Some endocrine and physiological responses of male buffalo calves to shelter in summer and winter.** HAU.

SANJAY GANDHI POST GRADUATE INSTITUTE OF MEDICAL SCIENCES

P.B.No. 375 RAEBARELI ROAD, LUCKNOW-1 EPABX NO. : 51200, 53700, 54800, 55800 FAX : 0522-51993

Advt. No. 35/92 **LAST DATE : 31.1.1993.**

RECRUITMENT FOR FACULTY POSITIONS

Applications are invited on prescribed form for the following faculty position :-

Sl. No.	Department	Prof.	Addl. Prof.	Assoc. Prof.	Asstt. Prof.
1.	Nephrology	1	–	–	–
2.	Anaesthesiology	–	2 (one for cardiac-Anaesthesiology & one for Neuro-anaesthesiology)	–	–
3.	Radiodiagnosis	–	–	–	2
4.	Biostatistics	–	–	1	–
5.	Surgical Endocrinology	–	–	1	–

ESSENTIAL QUALIFICATION AND EXPERIENCE

Medical candidates should have completed 14, 10, 06 and 03 years of service in the speciality after post-graduation in a recognised teaching institution for Professor, Additional Professor, Associate Professor and Assistant Professor respectively. Non-medical candidates should have teaching experience of 12, 09, 06 and 03 years respectively after Ph. D. degree, D.M./M.Ch.

Qualifications and teaching experience are essential as per MCI recommendations.

(Relaxation permissible in exceptional cases as per MCI rules).

UPPER AGE LIMIT

50 years, relaxable upto 5 years for Government Servants, Scheduled Castes and Scheduled Tribes and exceptionally qualified candidates.

DESIRABLE QUALIFICATION AND EXPERIENCE

For Sl. No.3 : Preference will be given to those candidates having experience in M.R.I. work (for one post of Assistant Professor only).

For Sl. No.4 : Preference will be given to candidates who have specialisation in demography or Biostatistics with knowledge of computer applications in Medical research.

GENERAL CONDITIONS

1. Candidates are requested to apply on prescribed forms available alongwith instructions which can be obtained from **Executive Registrar** of the Institute on payment of Rs. 25/- through Bank Draft in favour of Director, SGPGI, Lucknow accompanied with a stamped (Rs.13/-), self addressed envelope (size 10" by 12").
2. For candidates from abroad Bio-data on plain paper can be submitted and last date for these applications will be **15.02.1993.**

CORRIGENDUM

Advt.No.25/92

Reference Advertisement No. 25/92 last date for which was 20th October, 1992 for submission of application for different faculty positions at the Institute Advertisement for the posts at Sl. Nos. 1,2,5 & 8 for Professor of Clinical Immunology, Immuno-Pathology, Neurology, Transfusion Medicine have mentioned some preferential desirable qualifications. These posts are open for persons who have shown excellence in the field with any area of specialisation. Other conditions of the advertisement will remain the same. All those who have applied against the earlier advertisement No. 25/92 need not to apply again. However, if they desire, they may submit any other additional achievements.

Applicants may submit their applications by **31.1.1993.**

ANNOUNCEMENT

The examination for admission to D.M. Courses fixed for 6th December 1992 will now be conducted on 27th December 1992.

DIRECTOR

MINISTRY OF HUMAN RESOURCE DEVELOPMENT
(DEPARTMENT OF EDUCATION)

ROMANIA GOVERNMENT SCHOLARSHIP, 1992-93

Applications are invited on plain paper in the given format from Indian nationals residing in India for the award of 2(Two) scholarships offered by the Government of Romania for study/Research leading to Ph.D. in following subjects:

Subject Fields : i) Finance & Bank Business, ii) Management.

Value : 10,120.00 Lei per month. This allowance will cover all expenses.

Duration : 3-4 years with one year for intensive studies of Romanian Language

Age : Not exceeding 35 years as on 31.12.1992.

Qualifications : Uniformly good academic record with at least 60% marks at Master's degree level in the concerned subject of study.

Essential experience : At least two years teaching/research/practical experience as on 31.12.1992 in the subject fields selected, after the prescribed qualifications. Successful completion of M.Phil will be counted towards one year's experience.

Passage Cost : Travel expenses from India to Romania and back will be borne by the candidate/or his/her sponsors/employers. Subject to availability of funds, the passage cost may be met by the Government of India, provided the candidate is eligible under the rules.

NOTE : (1) The following documents must be attached with the application: (a) Attested copy of the certificate certifying the date of birth (b) Candidates belonging to SC/ST must attach a copy of certificate to this effect (c) Attested copies of marks sheet of qualifying examination (d) Attested copies of all degrees/diplomas/certificates, etc. (e) A clear and precise programme of study/research and questions proposed to be undertaken in donor country (f) A recent passport size photograph of candidate to be affixed on the prescribed application form, 4 spare photos. (2) Application in the subject field other than those specified above will not be considered. (3) Candidates who have already been abroad for study/specialisation/training either on scholarship or on their own are eligible to apply only **if they have been in India for at least three consecutive years after their return from abroad.** (4) Applications of candidates who are at present residing abroad will be considered. (5) Candidates should have sufficiently good knowledge of India and the Donor country. (6) Applications which do not contain any of the required documents will be treated as incomplete and will not be considered. (7) No correspondence will be entertained with candidates not selected for interview/scholarship. (8) Canvassing in any form will be a disqualification. (9) Candidates must send their applications fully sponsored by their employers. Advance application duly completed in all respects may also be considered provided the application through employer is received within a fortnight from the last date prescribed for the receipt of completed applications. (10) Applications received after the prescribed date will not be entertained.

Candidates should apply for the above scholarships on plain paper (preferably typed) furnishing the full details/particulars to the **Under Secretary, Ministry of Human Resource Development, Department of Education, External Scholarship Division, Section ES.I, A.1/W.3 Curzon Road Barracks, Kasturba Gandhi Marg, New Delhi- 110001 latest by 20.12.92.**

APPLICATION FORM

Passport size photograph duly signed in ink to be pasted here (without photograph application will be considered incomplete)

1. Scheme under which applied : ____________________
2. Subject: ____________ Sub-subject : ____________
3. Name in full as in passport Dr./Shri/Smt./Kumari

   ____

   (Surname) (First name) (Second name)
4. Name of father:
5. Name of sponsoring authority and/or name of the authority which will employ you on return from abroad:
6. a) Date of Birth :

   b) Place of Birth :
7. a) Are you a citizen of India :

   b) State to which you belong :

   c) Are you a member of Scheduled Caste/Scheduled Tribe. If so, give particulars and attached a certificate from the District Magistrate of your place of residence in support of your claim.

For Official use only A Q E

8. Address of the applicant with pin code number :

   i) Present/mailing :

   ii) Permanent :
9. Particulars concerning Exmainations passed commencing with Matriculation or equivalent examination (attach attested photocopy of each certificate/diploma/degree for record).

University/ Board/ Institution	Examination passed with year	Class/Div.	Percentage of marks & position if any	Subject taken

10. a. Details of papers published, if any:

    b. What you have been doing since last examination mentioned under Col. 8.
11. a. Particulars of employment :

Office/ Instt.where employed	Date of joining	Date of leaving	Post held	Monthly salary	Nature of duties

    b. Have you any contract obligation with your employer ? If so, furnish details.

12. a. Knowledge of foreign languages, if any (attach proof if possible)

Skill		Very good	Good	Fair	Nil
Comprehension	Spoken				
	Written				
Expression	Spoken				
	Written				

13. Nature of proposed programme of study/research :

a. Field of study

Main subject :

Sub-subject :

b. Scholarship/Fellowship desired for Training/ Specialisation

Doctoral/research :

Post-doctoral study/: research

c. Name of the Institution (if known) where admission/training is desired (in order of preference).

d. Are you willing to accept a place at some other institution if the appropriate scholarship agency recommends it?

e. Have you already approached any University or University Professor in the country in which you intend to study? If so, give name & results.

f. Degree sought, if any :

g. Give separately in extra sheets, brief statement in about 100 words each about :

a. The work engaged in

b. Nature, programme of study/research desired.

14. Future prospects after studies/research.

a. Plan for the future

b. How are these related to the technical or economic development of the country?

15. a. Have you applied for any other scholarship in the last two years? If so, state the name(s) of the scholarship(s) and the subject of study/research proposed therein. Are you willing to be considered under any similar scholarship scheme involving study in another country? If so, which?

b. If you had applied under this scheme previously please indicate the result.

16. Give below the names of two persons (they must not be related to you) who are in a position to testify from their personal knowledge as to your fitness for the proposed courses of study. They must be persons under whom you have worked or studied.

i) Name with full address :

ii) Name with full address:

17. Have you ever been abroad? If so, give the following particulars :

Country visited	Date of visit	Duration of visit	Purpose of visit	Scholarship(s) received, if any

18. Father's name (in full) :

a) Nationality :

b) Occupation :

c) Address :

19. In case you are married, please state :

a. The name of your wife/husband will full address :

b. Nationality

c. Occupation (Please give designation with full address, if he/she is employed).

20. Next of kin to be notified in the case of emergency (give name, address and relationship).

21. I hereby declare that the entries in this form and the additional particulars (if any) furnished in reply to the questions above are true to the best of my knowledge and belief.

(Signature of the candidate)

Place :

Date :

22. I understand that if I fail to avail myself of this scholarship under any circumstances, the Government of India, will not consider me for any scholarship being administrated by them for a minimum period of at least one year from the date by which this scholarship should have commenced.

(Signature of the candidate)

Place :

Date :

23. a. Certified that Shri/Smt/Km. ________________ is employed by us/me. He/She has been working here as ________________ since ___ __________ and has been sponsored by us/me for study abroad.

b. He/She will be relieved by me/us, if selected.

c. I/We undertake that he/she will be permitted to join his/her department/organisation on return from study abroad. I/We will ensure that his/her terms and conditions of service i.e. salary, seniority, promotion, leave etc. will not be adversely affected on account of his/her absence and further that everything possible will be done to provide the scholar with work and conditions of service suitable to and commensurate with his/her qualifications/training obtained abroad.

(Signature of the Employer/
Sponsoring Authority)
Seal of office

Place :

Date :

davp 92/442

KURUKSHETRA UNIVERSITY

KURUKSHETRA

(Advt. No. 5/92)

Applications on the prescribed form are invited for the following posts :-

1. **UNIVERSITY TEACHING DEPARTMENTS**

PROFESSORS (Grade : Rs. 4500-150-5700-200-7300)

i) Computer Science & Application (1)

ii) Geography (1)

Specialization : Geomorphology/Landform Geography/Rural Geography/Urban Geography/ Water Resources/ Agricultural Geography.

iii) English (1)

Specialization : Modern British/Literary Theory.

iv) English (Temporary but likely to continue) upto 7.1.1995. (1)

Specialization : American Literature.

v) Law (Temporary but likely to continue in the leave vacancy, one upto 20.8.93 and other upto 31.10.94) (2)

vi) Political Science (2)

Specialization : i) Indian Political System/ Public Administration.

ii) Political Sociology/ Research Methodology.

vii) Hindi (2)

Specialization: i) Medieval Hindi Literature.

ii) Modern Hindi Literature.

viii) Philosophy (1)

ix) Ancient Indian History Culture & Archaeology. (1)

Specialization : Ancient Indian History, Culture and Archaeology.

x) Lib. & Information Science. (1)

xi) Geology (1)

Specialization : Ground water Hydrology/Marine Geology/Structural Geology/ Petrology/ Engineering Geology/ Palaeontology and stratigraphy/Exploration Geology/Environmental Geo science.

xii) Geophysics (1)

Specialization : Theoretical Seismology/Solid Earth Geophysics/ Exploration Geophysics/ Geomagnetism/Inversion Theory/Non linear Mechanics/ Fluid Earth System/Mathematical Geophysics/Signal Processing.

Essential Qualifications

i) As per UGC Rules.

ii) Master Degree in Geophysics/Physics/ Mathematics.

xiii) Atmospheric & Oceanic Science. (1) **Essential Qualifications:-**

Master'sdegree in Physics/ Mathematics/Geophysics/ Oceans/Atmospheric Science.

Specialization : AtmosphericSciences/Oceanic Sciences/Geophysical Fluid Dynamics.

2. **READERS (Grade: Rs. 3700-125-4950-150-5700) (UGC)**

i) Computer Science & Application (1) **Desirable Qualifications:-**

Ph.D.in Computer Science/ M.S. in Software Systems with published research work of University standard.

ii) Geography (1)

Specialization : Agricultural Geography/ Cultural Geography/Physical Geography.

iii) English (1)

Specialization : English Language Teaching (E.L.T.)

iv) Law (2)

v) Tourism (1)

Specialization : Hotel Management.

Essential Qualifications:

i) Post-graduate Degree in Hotel Management

OR

ii) Post-graduate Degree in Tourism or Allied* subjects with three years Diploma in Hotel Management.

iii) Five years teaching experience/Work experience in Hotel (3to5 Star) in managerial capacity.

OR

iv) Post-graduate degree in Tourism or Allied* subjects with atleast 7 years' Hotel experience in managerial capacity.

*Allied Subjects : MBA/M.Com./Economics/Ancient Indian History/ Archaeology/Sociology/Psychology/Anthropology.

vi) Hindi (2) i) Hindi Drama and Modern Prose

Specialization : ii) Folklore of Haryana

vii) Ancient Indian History Culture & Archaeology. (2)

Specialization : i) Archaeology. Adequate experience of archaeological Field Work.

ii) Ancient Indian Art and Architecture.

3. **LECTURERS (Grade : Rs. 2200-75-2800-100-4000) (UGC)**

i) Electronic Science. (Post B.Sc. Diploma Course) (Leave vacancy upto 30.9.1993) (1)

Specialization : Microprocessors and Electronic Instrumentation/ Semiconductor Electronic Devices, Physics and Modelling/Device Circuit Simulation.

ii) Computer Science & Application. (1)

Specialization : Discrete Mathematics Structure.

Qualifications:

Master of Computer Application/Ph.D. in Mathematics with some knowledge of Computer Programming.

iii) Geography (1)

Specialization: Agricultural Geography/Geography of Environment/Medical Geography/ Population Geography/Physical Geography/Rural Settlement/Urban Geography.

iv) English (2) (One reserved for Scheduled Caste candidates)

v) Law (1) (Reserved for Scheduled Caste candidates)

vi) Tourism (2) (One reserved for S.C. candidates)

Specialization : i) Cultural Tourism.

Essential Qualifications:

Post-graduate Degree in Tourism/Ancient Indian History/Archaeology/Sociology/Anthropology.

Desirable : Exposure in Tourism.

ii) Accounting and Finance. (For S.C candidates)

Essential Qualifications:

Master of Tourism Administration/Master of Business Administration/Master of Commerce.

Desirable : Exposure in Tourism.

vii) Punjabi (1)

viii) Philosophy (1)

ix) Ancient Indian History Culture & Archaeology. (1)

Secialization : Ancient Indian History, Culture and Archaeology. Preference will be given to candidates having good knowledge of Indian Epigraph.

x) Hindi (for Directorate of Correspondence Courses) (2)

Specialization : i) Medieval Literature

ii) Modern Literature

xi) Economic (For Directorate of Correspondence Courses) (1)

4. **DIRECTOR CORRESPONDENCE COURSES** (1) (Grade : Rs. 4500-150-5700-200-7300)

Qualifications: A Ist or High 2nd Class Master's Degree of Indian University or an equivalent degree of a foreign University with atleast 10 years experience of Teaching and Research/Administration.

OR

Ph.D.with atleast 10 years teaching experience in a University OR College OR Directorate/Institute of Correspondence Courses.

Desirable : a) 3 Years experience of administration in a University OR College OR Directorate/Institute of Correspondence Courses as Reader/Professor/Principal.

b) Knowledge of Hindi.

5. **DEAN OF COLLEGES** (1) (Grade: Rs. 4500-150-5700-200-7300).

(On a tenure basis for three years).

Qualifications:

1. M.A/M.Sc. Second Class

   Preference will be given to candidates holding Ph.D. Degree.

2. 10 years' experience as Principal of some College or

Professor/Reader of 10 years' standing of Post-graduate Department of the University or 10 years' Administrative experience in an organisation of equivalent status.

3. Knowledge of Hindi.

6. **MANAGER (Printing & Publications)** (1) (Grade: Rs. 3000-100-3500-125-4500)

Qualifications :

i) Should be graduate from a recognised University;

ii) Should have passed Hindi upto Matric standard;

iii) Should hold a three years diploma in printing technology from a recognised Institute in India or abroad. Preference shall be given to a person having specialised in both letter press and offset processes;

iv) should have administrative experience of atleast 10 years in a supervisory post in the Management and administration of a large printing press with allied branches employing about hundred employees.

7. **ASSISTANT DIRECTOR SPORTS (MALE)** (1) (Grade: Rs. 2200-75-2800-100-4000)

Qualifications:

i) A Ist/2nd Class Master's degree in Physical Education OR Ist/2nd Class M.A./ M.Sc. with Ist/2nd Class Diploma in Physical Education.

ii) At least 5 years' experience of organising games at the College/University level, relaxable in case of outstanding candidates possessing high sports achievements and educational qualifications. Preference to N.I.S. qualified persons.

8. **SENIOR TECHNICAL ASSISTANT FOR DEPARTMENT OF ELECTRONIC SCIENCE.** (1) (Grade Rs. 1640-60-2600-EB-75-2900)

Qualifications :

IInd Class B.E./B.Tech./ M.Sc. in Electronics.

OR

B.Sc. Electronics/3 year Diploma in Electronics/ B.Sc. Non-Medical with post B.Sc. Diploma Course in Electronics with 3 years' experience in the operation, maintenance & repair of instruments. Candidates will be tested for their aptitutde in the repair, maintenance and operation of instruments.

9. **SENIOR TECHNICAL ASSISTANTS FOR DEPARTMENT OF PHYSICS** (2) (Grade: Rs. 1640-60-2600-EB-75-2900)

Qualifications:

Atleast M.Sc. 2nd Class in Physics with 3 years' experience in the line.

OR

Diploma in the relevant subject with 7 years' experience in the line.

However, for internal candidates, persons having Matriculation in Science and atleast 10 years' experience in the following job areas will also be considered:-

A. Electronics instruments – Maintenance, Repairs & Design.

B. Mechanical Workshop.

C. Glass Blowing and Glass Apparatus.

D. Carpentery, Sheet Metal Trade & Welding.

E. Nuclear Track Scanning Work.

AND

Qualifying a Departmental Test.

10. **LABORATORY ASSISTANTS FOR DEPARTMENT OF ELECTRONIC SCIENCE.** (2) (Grade: Rs. 950-20-1150-EB-25-1500)

(One for General Category and one for Ex-service men)

Qualifications: Matric with Science Ist Class.

OR

Matric with Science IInd Class and three years' experience in the line.

Desirable: Familiarity with Laboratory working conditions and various instruments/components/accessories used in a laboratory.

11. **STENO-TYPISTS (ENGLISH-20)** (Grade: Rs. 950-20-1150-EB-25-1500 + Rs. 100/- as special pay.

(10 for Ex-servicemen, 4 for General, 3 for Scheduled Castes, 2 for Physically Handicapped and 1 for Backward Class)

(HINDI-5) General-3, Ex-Servicemen-1, Scheduled Caste-1.

Qualifications: Matriculation/Higher Secondary/Pre-University at least in 2nd Division or B.A. or Prabhakar/Visharad (for Steno-Typist Hindi only) or its equivalent, (relaxable to Matric 3rd Division in the case of Ex-servicemen only). English Shorthand at 80 words per minute and transcription thereof at 15 words per minute for Steno-Typist (English) and Hindi Shorthand at 64 words per minute and transcription thereof at 11 words per minute for Steno-Typist (Hindi).

12. **LIBRARIAN IN THE INSTITUTE OF SANSKRIT & INDOLOGICAL STUDIES.** (1) (Grade: Rs. 1600-50-2300-EB-60-2660)

Qualifications:

i) M.A. Sanskrit 2nd Division (55%)

ii) M.Lib. Science good 2nd Division (55%)

iii) Three years experience as Professional Assistant OR

i) M.A. Sanskrit good 2nd division (55%)

ii) Diploma/B.Lib.Science 2nd Division (55%)

iii) Five years experience as Professional Assistant.

Desirable:

Knowledge of some other classical Indian languages.

13. **TABLA INSTRUCTOR IN THE DEPARTMENT OF MUSIC & DANCE.** (1) (Grade: Rs. (950-20-1150-EB-25-1500)

Qualifications:

i) A degree of B.Music of an Indian University OR an equivalent qualification of a foreign University.

Note: Sangeet Visharad of Bhatkhande, Sangeet Vidyapeeth, Lucknow, Sangeet Visharad of Gandharva Mahavidyalaya and Sangeet Prabhakar of Prayag Sangeet Samiti, Allahabad will be treated as equivalent of B.Music.

ii) Record of outstanding performance and experience.

iii) Qualifications are relaxable in case of Artists/specialists of repute.

14. **JUNIOR ENGINEER (Civil)** (3) (Grade: Rs. 1640-60-2600-EB-75-2900)

Qualifications:

Three years Diploma in Civil Engineering from recognised Institute and preferably with three years experience of Civil Works in Govt./Public Buildings.

Only candidates who meet the qualifications laid down in the booklet attached with the application form and in the advertisement will be called for interview. Specialization for the post of Professor/Reader/Lecturer does not mean merely passing a compulsory or option subject in the specified specialization in M.A./M.Sc. examinations.

For reserved posts only candidates belonging to reserved categories should apply.

The applications already received for the posts of Professor of Computer Science & Applications vide Advt. No. 2/92, Director, (Correspondence Courses), Professor of Political Science vide Advt. No. 1/91, Philosophy, Library & Information Science, Geophysics, Atmospheric & Oceanic Science Vide Advt. No. 6/91, Reader in Ancient Indian History vide Advt. No. 6/91 and Reader in Hindi vide Advt. No. 2/90 and Lecturer in English vide Advt. No. 1/91, Lecturer in Hindi for Correspondence Courses vide Advt. No. 4/89, Librarian in the Institute of Sanskrit & Indological Studies vide Advt. No. 1/88 and Junior Engineer vide Advt. No. 2/89 have been cancelled and they are required to apply afresh, but no application fee is required to be paid by them again.

The prescribed application form for both the teaching and non-teaching posts can be had from the Manager, Printing & Publications, Kurukshetra University, Kurukshetra on payment of Rs. 10/- for Sr. No. 1 to 3 (xi) and Rs. 5/- for Sr. No. 4 to 14 on the counter or by making a written request accompanied by self-addressed envelope (23x10 cms) duly stamped for Rs. 8/- each for teaching and non-teaching posts alongwith the Bank Draft of Rs. 10/- (teaching posts) and Rs. 5/- (non-teaching posts) respectively drawn in favour of the Registrar, Kurukshetra University, Kurukshetra and paybale at the State Bank of India, University Campus, Kurukshetra.

Applications on prescribed form complete in all respects (through proper channel for those in employment) should reach the Assistant Registrar (Estt.) of this University by **4th January 1993** alongwith Bank Draft of Rs. 15/- teaching posts and Rs. 10/- for non-teaching posts as application fee, drawn in favour of the Registrar, Kurukshetra University, Kurukshetra or the amount can be deposited with the Cashier of this University and the original receipt be enclosed with the application form. SC/ST/BC & Ex-servicemen are exempted from the application fee.

The applications not in the prescribed proforma or incomplete applications not supported with required application fee, attested copies of the certificates or application received after the last date will be liable to be rejected.

REGISTRAR

CLASSIFIED ADVERTISEMENTS

International Institute for Population Sciences

(Deemed University)

(Under the Ministry of Health & Family Welfare)

Govandi Station Road, Deonar, Bombay-400 088.

ONE POST OF DIRECTOR AND SENIOR PROFESSOR

– Temporary but likely to continue

1. **Scale of Pay:** Rs. 5900-200-7300. Allowances at the rate admissible to Central Government employees stationed at Bombay.
2. **Qualifications:**
   - (a) **Essential:**
     - (i) M.A./M.Sc. in Demography or Statistics or Economics or Mathematics or Sociology with Specialisation in Statistics;
     - (ii) Post-graduate training in Demography from an Institute of repute in Indian or Foreign University;
     - (iii) Atleast 10 years' experience in Demographic Research, out of which atleast 5 years teaching experience in a research centre or University or Government Department in a capacity equivalent to Professor rank;
     - (iv) Administrative experience of atleast 3 years in some teaching and/or research Institute or University or Government Department.
   - (b) **Desirable:**
     - (i) Doctorate degree in Demography;
     - (ii) Research publications of high standard in the field of demography, Population Studies, Economics and/or Statistics.
3. **Age:** As on 1st January, 1993 not more than 50 years. Age is relaxable for Scheduled Castes/Tribes by 5 years and in the case of displaced persons and ex-servicemen as per the existing rules. Age is also relaxable by the Executive Council in suitable cases.
4. **Receipt of Applications:** Candidates residing in India should send their applications in duplicate on plain papers giving the bio-data as per the format given below, to the Under Secretary (C&G), Ministry of Health and Family Welfare, Nirman Bhavan, New Delhi-110011, latest by **31.1.1993** and those residing outside India should send their applications latest by 28.2.1993, duly accompanied by attested copies of certificates/degrees. Applications received thereafter will not be considered.

FORMAT

(a) Name of the Candidate with Surname:

(In Block Letters)

(b) Permanent Postal Address:

(Husband's Name in the case of Married Female Candidates)

(c) Nationality of the Candidate:

(d) Nationality of Father/Husband:

(e) Details of Birth (i) Date of Birth:

(ii) Place of Birth: (iii) District: (iv) State:

(f) Age as on 1st January, 1993:

(g) Educational and Other Qualifications:

(h) Details of Research Papers Published and Thesis Submitted:

(i) Previous Employment and Experience:

(j) Whether belonging to Scheduled Castes/Scheduled Tribes Community:

(If so, an attested copy of certificate to this effect from competent authority to be attached)

(k) Are you holding or have any time held an Appointment under the Central or State or Semi/Quasi Govt. body or an Autonomous body or Public Undertaking. If so, were you any time dismissed, removed or compulsorily retired from the service – Give complete details:

N.B. Candidates already employed in Central/State/Semi Government organisations should send their application through their present employers.

KUVEMPU UNIVERSITY

B.R. Project-577115 – Dist. : Shimoga

NOTIFICATION

No. KU/EST-2 (TS) 1/92 **Dated: 2/12/92**

Applications are invited in 8 sets for the following teaching posts.

PROFESSOR :- Pay Scale : Rs. 4500-150-5700-200-7300

Kannada-01 (SC) English -01 (Unreserved) History-01 (Unreserved) Economics-02(SC-1, Unreserved-1) Political Science-01 (Unreserved) Industrial Chemistry-01 (Unreserved) Mathematics-01 (Unreserved) Physics-01(Unreserved) Life Science-01(Unreserved) Master of Business Administration-01 (Unreserved) Commerce-01 (Unreserved) Environmental Science-01 (Unreserved) Sociology- 01 (Unreserved) Statistics-01 (Unreserved).

READERS :- Pay Scale : Rs. 3700-125-4700-150-5700

Kannada-02 (SC-1, ST-1) Economics-03 (SC-1, ST-1, GM-1) Industrial Chemistry-01 (SC-1) Mathematics-01 (SC-1) Physics-01 (Unreserved) Evironmental Science-02 (SC-1, Unreserved-01) Life Science-02 (SC-1, Unreserved-01) Master of Business Administration-01 (Unreserved) Commerce-02 (SC-1, Unreserved-1) Statistics-01 (Unreserved).

LECTURER :- Payscale : Rs. 2200-75-2800-150-4000

Kannada-04(ST-1, A-1, B-1, GM-1) English-02 (SC-1, ST-1) History-02 (SC-1, ST-1) Economics-09 (SC-2, ST-1, A-1, B-1, C-1, E-1, GM-2) Industrial Chemistry-01 (SC-1) Mathematics-02 (SC- 1, ST-1) Physics-02 (SC-1, Unreserved-1) Environmental Science- 03 (SC-1, ST-1, GM-1) Life Science-02 (SC-1, Unreserved-1) Master of Business Administration-02 (SC-1, Unreserved-1) Commerce-04 (SC-1, ST-1, B-1, GM-1) Statistics-02 (SC-1, Unreserved-1).

RESEARCH ASSISTANT :- Pay Scale : Rs. 1720-3170

Kannada-02 (SC-1, Unreserved-1) English-01 (Unreserved-1) History-02 (SC-1, Unreserved-1) Economics-01 (Unreserved) Political Science-01 (Unreserved) Sociology-01 (Unreserved) Mathematics-01 (Unreserved) Commerce-01 (Unreserved).

Application forms may be obtained from the Registrar, Kuvempu University, B.R. Project by sending a crossed Demand Draft for Rs. 25/- payable at State Bank of Mysore, B.R. Project or State Bank of India, Shankaragatta drawn in favour of Kuvempu University. The Application together with necessary documents should reach the Registrar of this University on or before 11-01-93. Incomplete applications will be rejected.

Specialisation and other details will be supplied along with the application form.

Qualifications:-

For Professors:-

1. An eminent Scholar with Doctorate Degree and published work of high quality.
2. 10 years teaching or research experience.
3. Successful guidance leading to Doctorate Degree or outstanding Scholarship with doctorate and established reputation and significant research contribution in the relevant field.

For Readers:-

1. A good academic record with a Doctorate Degree or equivalent published work in the relevant subject.
2. 5 years teaching or research experience with atleast 3 years experience as Lecturer or in an equivalent grade in the relevant subject.

For Lecturers:-

1. A good academic record with a Master's Degree in the relevant subject with atleast 55% marks or its equivalent grade as per UGC norms and 2 years teaching/research experience.
2. Ph.D. Degree/Research publications.

For Research Assistants :-

1. Second class Post Graduate Degree in the concerned subject.

Prof. H. J. Lakkappa Gowda
REGISTRAR

Sardar Vallabhbhai Regional College of Engineering and Technology, Surat-395007

Applications are invited for the Post of Deputy Registrar (Acad/Adm) at this college so as to reach on or before **31-12-92** in the prescribed form available on payment of crossed Indian Postal Order of Rs. 8-00 payable to the Principal and Secretary of this college alongwith self addressed envelope of 23 Cm x 10 Cms. Details regarding prescribed qualification, experience etc. will be furnished alongwith the application form.

The post is permanent one and carries pay scale of Rs. 2200-4000 with other allowances as admissible under the rules.

M. J. JANI
REGISTRAR

University College of Medical Sciences & Guru Teg Bahadur Hospital, Shahdara, Delhi-110 095

Applications on the prescribed form are invited for the following Teaching and Non-Teaching Posts to reach latest by **11th January, 1993.**

A. TEACHING :

Sr. Resident/Sr. Demonstrator :- (Rs. 3150-100-3350) and (Rs. 2000-60-2120 for non-medical) one post each for the Deptts. of Biochemistry, Physiology, Microbiology, Paediatrics, Obst. & Gynae., Psychiatry and Dentistry; Two posts each for the Deptts. of P.S.M. and Anaesthesia; Three posts for the Deptt. of Pharmacology.

E.Q: P.G.degree or diploma in the subject concerned. For Non-Clinical Departments, persons possessing M.Sc. in the subject concerned will also be eligible. Upper age limit 33 years.

B. NON-TEACHING :

1. Programmer-cum-Statistician:- Rs. 2200-4000 (One Post)

E.Q : a) A second class master's degree in Statistics or Biostatistics or Biometry.

b) Good knowledge of programming in Basic and FORTRAN.

c) Atleast two years experience of working on computers.

Desirable: Experience and/or training on Lotus, Wordstar, D-Base, and SPSS.

2. **Stenographer:** (One post) Rs. 1200-2040:

E.Q: Matriculation or equivalent qualification with proficiency in Shorthand at a speed of not less than 80 w.p.m. and proficiency in typewriting at a speed of not less than 35 w.p.m.

3. ***Jr. Asstt.-cum-Typist :** (5 Posts out of which 1 post is reserved for S.C. and 1 Post is for S.T.): Rs. 950-1500.

E.Q: Matriculation or equivalent qualification with minimum 35 w.p.m. in English Typewriting.

*All those candidates who have applied for the post in response to earlier advertisement of the College appearing in December-91/January-92 need not apply again. They must, however, intimate the College if they still wish to be considered, in which case they may, if required, up-date their bio-data.

All posts carry usual allowances at the rates prescribed by the University from time to time.

The prescribed application form can be obtained from the Office of the University College of Medical Sciences, Delhi-110095, personally or on written request alongwith a self-addressed envelope of size 28 cm. x 13 cm. with postage stamps worth Rs. 3/- referring to Advt. No. MC/Estab./2/11/92/VII. The cost of each form is Rs. 2/- which can be sent, if required, by post, by Indian Postal Order drawn in favour of the Principal, University College of Medical Sciences, Delhi-110095

PRINCIPAL

UTKAL UNIVERSITY

BHUBANESWAR-751004

ORISSA

Advertisement

No.Estt.I/1041-C/Vol.VI/16982/92

Dated 2/12/92

Applications on the prescribed Form (7 copies) available from the Office of the Deputy Registrar (General) on payment of Bank Draft for Rs. 50/- (Rupees Fifty only) drawn in favour of Comptroller of Finance, Utkal University on the S.B.I., Utkal University Campus Branch are invited for the following posts in various departments/constituent colleges of the University. The last date for submission alongwith all the enclosures is **15th January, 1993.**

The details of qualification and other terms and conditions will be supplied alongwith the form.

ESSENTIAL QUALIFICATION :

(A) **Professor/Director**

An eminent scholar with published work of high quality actively engaged in research with 10 years of experience in Post Graduate Teaching and/or research at the University/National Level Institutions including experience or guiding research at doctoral level.

OR

An outstanding scholar with established reputation who has made significant contribution to knowledge.

(B) **Reader/Placement Officer**

Good academic record with Doctoral degree or equivalent published work. Candidates from outside the University system shall also possess atleast 55% marks or an equivalent grade at the Master's level. Eight years experience in teaching and/or research including up to three years for research degree and has made some work in the area of scholarship as evidenced by quality of publications, contribution to educational renovation, design of new courses and curricula.

(C) **Lecturer/Traditional Scholar**

Good academic record with atleast 55% marks or an equivalent grade at Master's degree level in the relevant subject from an Indian University or an equivalent degree from foreign University. Candidates besides fulfilling the above qualification should have cleared the eligibility test for Lecturers conducted by UGC/CSIR or similar Test accredited by the UGC. Exemptions from passing the Lecturers' eligibility test is only applicable to candidates who have done Ph.D. up to December, 1992 or M.Phil up to March, 1991.

DESIRABLE QUALIFICATION (FOR M.C.A.)

Professor/Reader

A first Class Degree at Master's level in Computer Science/Engineering/Physics/Mathematics with Ph.D. or equivalent research work in Computer Science.

Lecturer

Good academic record with Master's Degree in Computer Science or Master's Degree in Engineering/Mathematics/Physics with three years experience in Computer Application.

(FOR DIRECTOR, CORRESPONDENCE COURSES)

Experience in Organising Continuing Education Programme or in the area of Human Resource Development.

Placement Officer:

M.Com/M.B.A. with specialization in Marketing, Administrative/Industrial work.

PROFESSOR/DIRECTOR

1. Anthropology-One (Physical/Pre-History)
2. Geology-One (Lien vacancy)
3. History-Two (one VIII plan)
4. Labour Welfare-One (VIII plan)
5. Oriya-One (D.S.A. - Comparative Indian Literature)
6. Psychology-One (C.A.S.- Thrust of C.A.S – Social/Educational/Developmental/Comparative Psychology)
7. Public Administration in Department of Political Science-One (VIII plan)
8. Sociology-One (VIII plan)
9. M.C.A. - One
10. Director, Correspondence Courses-One.

READER/PLACEMENT OFFICER/READER CUM PRINCIPAL

1. Anthropology-One
2. Chemistry-One (in collaboration with Physics)
3. English-One
4. Geography-Two (one Lien vacancy)
5. History-Three (one VIII plan, one D.S.A. with specialisation in History of Orissa)
6. Library and Information Science-Two (one VIII plan)
7. Placement Officers(In M.B.A. Department)-One
8. Psychology-One (Thrust area of C.A.S-- Social/Educational/Developmental/Comparative Psychology)
9. Public Administration (In Department of Political Science)-One
10. Statistics-One (VIII plan)
11. M.C.A. – Two
12. Mathematics-One,
13. Reader cum Principal, University Law College-One.

LECTURER/TRADITIONAL SCHOLAR

1. Anthropology - One (S.T. for D.S.A. – Regional Development)
2. Analytical and Applied Economics - One (S.T.– Mathematical Economics)
3. Botany-One (S.T.– Biosystematics/Cyto Taxonomy)
4. Chemistry-Three (One-S.T.-Theoretical Chemistry, One-General-Organic Chemistry & One-S.C.- Inorganic Chemistry - VIII plan)

5. Oriya – One (S.T. – Religious trend in Oriya Literature with Sanskrit background)

6. (Commerce-Two One-S.T. & One S.C.)

7. English-One (S.T. VIII plan)

8. History-One (for D.S.A. – Ancient Indian History)

9. Labour Welfare-One (S.T.)

10. Law - for M.S., Law College, Cuttack-Two (One-S.C. & One- S.T.),

11. Philosophy-One (S.T. – Traditional Scholar)

12. M.B.A. - Three
    - One-S.T. M.B.A./M.A. in General or Industrial Psychology.
    - One-S.T. M.B.A./M.A. or M.Sc. in Mathematics with Specialization in Statistics/M.A. or M.Sc. in Statistics.
    - One-S.C. M.B.A./M.A. in Personnel Management and Labour Welfare.

13. M.C.A.- Two (One S.T. & One S.C.)

14. Physics – One - S.T. (Experimental Physics),

15. Sanskrit -One (S.T. – Vedic Literature/Linguistics with knowledge of at least one European Language other than English).

16. Statistics-One (S.T) Preference will be given to the candidates having strong background in Probability Theory/Mathematical Statistics and adequate knowledge of Computer Application).

17. Directorate of Correspondence Courses - Four (One- S.T. Mathematics, One-S.C. Economics, One S.T.- Commerce and One- General-Oriya).

REGISTRAR

MAHATMA PHULE KRISHI VIDYAPEETH, RAHURI, DIST : AHEMDNAGAR.

(Maharashtra State)

No. ADVT/EST-A192/5195/of 92, **Dated :- 5.12.1992**

ADVERTISEMENT

Applications in the prescribed form are invited for the following posts so as to reach Mahatma Phule Krishi Vidyapeeth, Rahuri, Dist. Ahmednagar-413722 (Maharashtra State),on or before **15.1.1993.**

Sr. No.	Name of post	Total No. of posts	Reservation				
			SC	ST	DT/NT	OBC	Open
1	2	3	4	5	6	7	8
(A)	**Associate Professor in the discipline of :-**						
1)	Agronomy	4	1(p)	1(p)	-	-	2(p)
2)	Agril. Chem & Soil Sci.	5	1	1	1	-	2(p)
3)	Agril. Botany	4	1	1	-	-	2(p)
4)	Plant Pathology	4	1(p)	1	-	-	2(1 p)
5)	Horticulture	5	1(p)	1	-	-	3(2 p)
6)	Ani. Sci. & D.Sci.	2	-	1	-	-	1(p)
7)	Agril. Economics	2	-	1	1(p)	-	-
8)	Agril. Extension	3	-	1	1	-	1(p)
9)	Vet. Physiology & Bio-Chem.	1	-	-	-	-	1
(B)	**Assistant Professor in the discipline of:-**						
1)	Agronomy	5	1	2(1p)	-	-	2(p)
2)	Agril. Chem.& Soil Sci.	4	1(p)	1	-	-	2(p)
3)	Agril. Botany	7	2	2(1p)	-	-	3(p)
4)	Agril. Entomology	4	2	-	-	-	2(p)
5)	Plant Pathology	3	1	1(p)	-	-	1(p)
6)	Horticulture	4	1	2(p)	-	1(p)	-
7)	Ani. Sci. & D. Sci.	2	1	1(p)	-	-	-
8)	Agril. Extension	3	1(p)	1(p)	1(p)	-	-
9)	Vet. Physiology & Bio-Chem.	2	1	-	-	-	1
10)	Vet. Anatomy	1	-	-	-	-	1
11)	Vet. Microbiology	1	-	-	-	-	1
12)	Poultry Science	1	-	-	-	-	1
13)	Vet. Gynaecology	1	-	-	-	-	1
(C)	**Physical Training Instructor**	1	-	1	-	-	-

NOTE :- P = Probable. May increase or decrease and may not be necessarily filled in.

POSTS AT (A) SR. NO. 1 TO 9 :-

Pay Scale : Rs. 3700-125-4950-150-5700.

Qualifications :-

Ph.D. in respective subject with five years experience in teaching, research or extension education, of which two years should be in the cadre of Assistant Professor or its equivalent;

OR

Master's degree in respective subject with seven years experience in teaching research or extension education, of which three years should be in the cadre of Assistant Professor, or its equivalent.

Posts At (B) Sr. No. 1 To 13 :-

Pay Scale :- Rs. 2200-75-2800-100-4000.

Qualifications :-

Ph.D. in respective subject, or Master's degree in the respective subject with two years experience in teaching, research, or extension education.

Posts At (C) :-

Pay Scale :- Rs. 2200-75-2800-100-4000.

Qualifications:-

A Bachelor's degree in Physical Education of the recognised University,

OR

A Bachelor's degree of recognised University in Arts, Science or Commerce followed by Diploma in Physical Education from Kandivali or any other recognised Institution.

Age Limit :-

As on 15.1.1993 for the posts at (A) Sr. Nos. 1 To 9 not above 40 years. For the remaining posts shall not be above 30 years. The maximum age limit is relaxable by five years in deserving cases and in respect of the persons belonging to SC/ST/DT-NT and OBC categories.

The maximum age limit is not applicable to the persons already on the regular establishment of this University.

How to apply:-

Prescribed application forms can be obtained from the Registrar, Mahatma Phule Krishi Vidyapeeth, Rahuri 413722, Dist. Ahmednagar, (Maharashtra State), on sending a self addressed envelope (11" x 5") with postage stamp of Rs. 2/- and a crossed I.P.O. of the value of Rs. 10/- payable to the Comptroller, Mahatma Phule Krishi Vidyapeeth, Dist. A'nagar. Application form duly filled in should reach this office on or before **15.1.1993.** Persons applying from places outside India may apply on plain paper giving full details regarding their age, qualifications, experience, etc. Payment of application fees will not be necessary in their cases.

NOTE :- The persons belonging to SC/ST/DT-NT and OBC shall send crossed I.P.O. of value of Rs. 5/- only.

NOTE :- The other details & conditions can be obtained from the Registrar, Mahatma Phule Krishi Vidyapeeth, Rahuri, Dist. Ahmednagar.

B.B.Pawar
REGISTRAR

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(in Block letters)

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4. (a) Date of birth (b) Age as on 1.10.1993

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6. Whether a member of SC/ST Community (If so, attach the relevant certificate from competent authorities)

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Examination passed	Name of Board/ University	Year of passing	Division or class	Percentage of marks	Subjects taken

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(Full signature of candidate)

Date :

Place:

Full signatures of the employer
sponsoring authorities (in case of employed candidates)
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davp 92/443

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(Advt. No. 12/1992, I.C.M.R. Hqrs.)

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Prof. S.C. Gupte, Vice-Chancellor, Poona University, speaking at the inaugural function of the AIU Workshop on Use of Computers. Seated on his left are Shri P.K. Malhan, Asstt. Director (Res), AIU, Prof. Arun Nigavekar, Director, EMRC, Dr. M.D. Nalawade, Registrar and Shri V.S. Pol, Secretary, Institute of Open Education, University of Poona.

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T.A. PAI MANAGEMENT INSTITUTE, MANIPAL

ADMISSIONS – BATCH NO. XI – 1993-95

TO

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Editor :
SUTINDER SINGH

The Capitation Fee Colleges
Some Issues

Jandhyala B. G. Tilak*

> **The capitation fee brings to the fore a clear class bias. It enables the rich to take admission whereas the poor has to withdraw due to financial inability. A poor student with better merit cannot get admission because he has no money whereas the rich can purchase the admission. Such a treatment is patently unreasonable, unfair and unjust.**
>
> – *The Supreme Court of India (1992)*

The Context

In the most recent judgement delivered by the Supreme Court (July 30, 1992)[1] on the fees and admission in capitation fee colleges in Karnataka, which is hailed by the national press as "truly a landmark in India's Constitutional evolution", the Court raised several issues regarding education, of which three assume utmost importance: (a) right to education, in this particular case, to higher professional education as a fundamental right, (b) capitation fees, and (c) differentiation in admission and fees on the basis of residence. The Court held the 'right to education' as "concomitant to the fundamental rights", enshrined under the Constitution, and stated: "the State is under a Constitutional-mandate to provide educational institutions at all levels for the benefit of the citizens." The Court also held, however, that this obligation on the part of the State could be discharged through opening State-owned institutions, or State recognized private educational institutions, (both however, charging the same levels of fees). On the capitation fees, the Court held it illegal, and with respect to differentiation, it held that differentiation based on the ground of residence is valid, but that the fees cannot be different.

All the three issues have serious implications for the whole education system in the country, and the role of the state versus the private sector in the development of education. This short paper does not discuss the first issue; it is narrowly confined to one specific aspect, viz., the capitation fee colleges, which was the central issue of the Supreme Court's judgement. The issue of differential fees is also referred to here. Both these issues are discussed in a broader framework.

Privatization of Higher Education

In the present worsening economic conditions; and the associated new economic polices of stabilization and adjustment, there is a great danger for the scientific enquiry and objectivity in analysis of empirical problems and policy issues to give place for practical compulsions. In the present context, the compulsions create a euphoria in favour of marketisation : that any activity (good or service) can (and should) be privatized. Education is one such sector. Even though private higher education is not a new phenomenon, relatively rapid growth of private colleges for professional higher education is a very recent phenomenon. State governments are playing not merely a catalytic role, but a highly encouraging role. How far is the growth of private higher professional education justified, and how far is the role played by the government correct?

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[1] "Mohini Jain versus State of Karnataka & Others," July 30 1992, Supreme Court, New Delhi.

* *National Institute of Educational Planning and Administration, 17–B, Sri Aurobindo Marg, New Delhi-110 016*

The need for diversification of finances for higher education is obvious. Until now higher education, like the rest of the education system is highly subsidized by the state. Nearly 80 percent of the total expenditure on higher education (recognized institutions – both general and professional) is met by the government – central and state. Less than 15 per cent comes from the students in the form of fees, and another 5 percent in the form of voluntary donations, etc., in 1983-84, the latest year for which such data are available (Tilak, 1993). Even with respect to professional education the corresponding figures are about the same (see Table 1).

Table 1

Sources of Finances for Higher Professional Education 1983-84 in Selected Disciplines (Colleges : Degree Standard and Above)

Percent

	Govt.	Univ.	Fees	Others	Total
Recurring					
Business Management	71.6	–	16.8	11.6	100
Engineering & Technology	75.3	3.8	14.6	6.3	100
Medicine	86.0	–	6.4	7.6	100
Non-Recurring					
Business Management	42.8	–	–	56.9	100
Engineering & Technology	83.4	–	–	16.6	100
Medicine	73.8	–	–	26.2	100
Total (Recurring+Non-Recurring)					
Business Management	60.4	–	10.2	29.4	100
Engineering & Technology	76.8	3.1	11.9	8.2	100
Medicine	84.8	–	5.7	9.5	100

Source : Based on Education in India 1983-84.

It is both imperative because of economic conditions, and desirable in view of efficienty and equity, a proper cost-sharing is made between the institution and individual sources, more specifically the government/private sector and the students. The declining budgets make it inevitable. To reduce the regressive effects of indiscriminate public financing of higher education this becomes necessary. And when mass education sectors (elementary education and literacy programmes) are starved of resources, this is ethically and morally compulsory. Of the various strategies of shifting the burden from the public domain to the non-governmental domain, 'privatization' is being viewed as an effective strategy, in fact, as a solution to all problems of public finances. How far is this view valid?

A detailed examination of functioning of private colleges in a cross section of countries leads us to conclude that many of the arguments made in favour of private colleges do not stand. In fact, in one of the recent analyses (*Tilak*, 1991), most of the myths about private colleges have been exploded. The myths are: (a) The demand for private higher education is due to its qualitatively superior nature to public education. (b) The external efficiency of private higher education is higher than public higher education : graduates from private universities receive higher labour market rewards in the form of lower unemployment rates, better paying occupations, and accordingly higher wage earnings. (c) Private sector responds to the economic needs of the individual and the society, and provides relevant types of education, in response to the market signals. (d) Private enterprises dealing with higher education, which is by definition a 'non-profit sector' has genuine philanthropic motives in opening private colleges and universities, and makes huge investments on their own in higher education without expecting any rewards. (e) Most public higher educational institutions are politicized; and only private institutions are apolitical. And (f) privatization of higher education improves income distribution, as public funding of higher education with all its 'perverse effects' is generally found to be regressive in effect. Also it is most generally noted that private colleges cater to the needs of the wealthy, and hence the benefits of education in the private institutions accrue largely to the rich, while the benefits of education in government colleges in general go relatively to masses, as the government colleges are compelled generally to provide subsidized education.

Private Higher Education in India

In the Indian mixed economy, where the contribution of private sector has been significant in general, the contribution of private sector to higher education has not been encouraging. To start with, private colleges in India that form about three-fourths of the total number of colleges, are of two types: privately managed but publicly funded colleges familiarly known as (government) "aided" colleges, and privately managed and funded colleges, known as "unaided" colleges. A large number of private colleges belong to the former category, and they receive government aid to meet almost the whole recurrent, and sometimes the capital expenditure. Hence strictly from the point of view of finances, such private colleges do not have any significant role. Even though there are some common problems associated with aided and unaided colleges, the discussion now is concerned with the unaided professional colleges, which are more familiarly known as the capitation fee colleges. These unaided private colleges, particularly the professional colleges have been really a recent phenomenon. They are the result of private enterprises and initiative. In the very recent period, their growth has been remarkable.[2] They are large in numbers, and are increasingly becoming more than the government colleges. These colleges have been largely concentrating on a few professional fields – engineering and medicine.

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[2] In 1988 it was reported that there were about 161 private engineering colleges in the country that charge high tuition fees or capitation fees (Shatrugna, 1988, p. 2624).

There is both increasing demand for and supply of private higher education in India. From the demand side, the private colleges have been growing in number essentially due to the existence of excess demand, particularly of upper classes and of those who fail to get admission in government colleges, for higher education on the basis of merit. The private enterprise satisfies this demand by opening colleges to be managed and funded by the private enterprise, with little government intervention. As they do not rely on government funds, such colleges charge high tuition fees. Besides, as the state intervention is negligible, these colleges evolve formal and 'informal' strategies to collect abnormal levels of fees, whether they are called capitation fees or not. These fees are ostensibly to recover the full costs of education.

The Illusory Benefits versus the Veracious Harmful Effects of the Capitation Fee Colleges

Capitation fee colleges have been favoured on a few theoretical and empirical grounds, some of which can be listed as follows :

1. Capitation fee colleges tap the untappped resources available in the society, and generate the much needed resources for the development of higher professional education. They provide considerable financial relief to the government.

2. There is no justification for financing of professional higher education out of the public revenues, of those whose ability to pay is very high. Particularly as about 85 percent of the public revenues comprise indirect taxes, paid by the poor, public financing of higher education of the rich is regressive.

3. As the state's ability to expand higher professional education is not elastic to the demand for the same, the students may go out of the state/country to fulfil their demand, an argument made by the Government of Andhra Pradesh in its 1992 Act. Capitation fee colleges check this out-migration of the students out of the state/country.

4. Lastly, the huge capitation fee is justified in these colleges, as these colleges do not receive any state support, but they have to invest huge amounts both on recurring and non-recurring accounts.

All these arguments are flimsy, and do not stand any rigorous empirical scrutiny (*see* e.g., *Kaul*, 1990). If we look at the actual functioning of these colleges, it can be noted that rarely quality of these institutions is found to be satisfactory. From the point of view of the suppliers, motives of profits, influence, and political power explain the growth of these capitation fee colleges (*Tilak*, 1990). Educational consideration hardly figure in this context, not to speak of social and national considerations like social justice, equity, and efficiency. As a result, higher education is subject to vulgar forms of commercialization. No surprise, if one terms these colleges as "bastard colleges", born illegally doing legal business, or legally born to do illegal business (*Singh*, 1983). They do provide financial relief to the government, though not to the students, providing higher education, but at huge and long term economic and non-economic cost to the society (*Kothari*, 1986). These colleges receive little public support. They charge huge donations and capitation fees running into a few lakhs of rupees per student,[3] and abnormal level of fees, 10-50 times the fees in government colleges. While other colleges are, by definition, non-profit institutions, these institutions not merely cover their costs, but also make huge "quick profits", which are not necessarily reinvested in education.[4]

Thus there are equally strong arugments against the capitation fee colleges, both on theoretical and empirical grounds, that will more than offset the arguments made in favour of capitation fee colleges, some of which are noted as follows :

1. The capitation fee colleges perpetuate inequalities in the systems. Economic inequalities accentuate inequalities in access to higher education, which in turn contribute to inequalities in occupational achievements, in earnings, and in socio-economic spheres as a whole. This is the greatest danger of the capitation fee colleges. No welfare state like India can afford this long term cost. Even the strong proponents of even mild privatization of education admit that privatization is "socially and economically divisive" in nature and effect (e.g., *Psacharopoulos and Woodhall,* 1985, p. 144).

2. An equally important consequence of the growth of private colleges is massive erosion in the quality and standards of higher education. Economic ability to pay replaces the merit criterion in the admissions in higher education. Particularly look at the provisions of the two Acts mentioned later in these pages. Irrespective of the student's rank position in the mere list, he/she would be given admission, provided the demanded capitation fees are paid.

3. If allowed, the capitation fee college system will eventually dominate the whole higher education scene, if not replace the government college system. Already their numbers are sizeable in Andhra Pradesh, Karnataka and Maharashtra. Accordingly, the need for expansion of the higher professional education system gets reduced. Higher education, the "public" or the "quasi-public good" (see *Tilak*, 1993), will turn out to be

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[3] Compared to Rs. 50,000-90,000 in 1989 (**Statesman**, New Delhi, 10 July 1989), capitation fees in the colleges presently amount to over Rs. 14 lakhs per student ("Money and Merit, " Editorial, **Times of India**, New Delhi, 3 August 1992).

[4] There has also been growth of what are known as "parallel" colleges, or teaching shops, which also share several of the features described above. Some of these colleges are registered under the Shops Act (**Nair and Ajit, 1992**).

a luxury good, and middle and even upper middle income classes may not afford it. It becomes a monopoly of the rich.

4. Capitation fee colleges would accentuate other social evils like escalation in dowries, as the dowries tend to include in reality the costs of education, and the costs of securing a job. Another social evil that would further get accentuated is corruption – economic, social, and political, about which the less said the better – corruption in getting sanction for opening of these colleges, teachers' recruitment, students admissions, etc.

5. Lastly, these colleges opened for profits, and with little considerations for national manpower needs, may cause serious imbalances in the professional manpower in the economy, as noted by the Supreme Court in case of medical manpower.[5]

Empirical evidence on all these aspects is known to every body, though such evidence is not well documented.[6] It may be noted that nowhere in the civilized world, one finds such capitation fee colleges. As the Supreme Court observed, this system is "wholly abhorrent to the Indian culture and heritage."

Hence it is no surprise that occasionally courts in India deliver judgments against such colleges on a variety of issues, such as fees, students' admissions, teachers' salaries, teachers' recruitment/appointments, etc. Yet, quite a few state governments go on enacting laws encouraging growth of such colleges.

Government and the Capitation Fee Colleges : Two Cases

We may briefly refer to the two most recent cases.

The Government of Karnataka passed an Act (1984) relating to capitation fee colleges. In 1989, provisions relating to fees in the private colleges have been clarified, according to which a differential fee structure was approved : Rs. 2,000 for those admitted on merit (government seats), Rs. 25,000 per annum for other Karnataka students, and Rs. 60,000 for other Indian non-Karnataka students. In practice, besides these tuition fees, perhaps all the students (or certainly all those admitted against the non-Government seats) have to pay a huge capitation fee (Rs. 4.5 lakhs in a particular case). When this was taken to the Supreme Court, in its judgement, the Court held that even the high tuition fee (Rs 60,000 in this case) was not tuition fee, but was the capitation fee, and found the whole capitation fee system illegal : "it is not permissible in law for any educational institution to charge capitation fee as a consideration for admission".

Another case refers to the 1992 Act of the Government of Andhra Pradesh, which is an amendment of an earlier Act (1983), relating to the capitation fee colleges in the State. The 1983 Act has noted that collection of capitation fee was an "undesirable practice", "contributing to large scale commercialization of education", and that keeping in view the merit and equity considerations, it should be "curbed"; and categorically stated: "the collection of any capitation fee by an educational institution or by any person who is in charge of or is responsible for the management of the institution is hereby prohibited." By 1992 the considerations of the Government changed altogether. The 1992 Act stresses on 'financial viability' of private unaided institutions, and protection of 'standards of education'. It allows the management of capitation fee colleges to fill seats upto 50 percent of the total number of seats, "irrespective of ranking assigned to them in such (entrance) test or examination."[7] This is little short of allowing 'auctioning' of 50 percent of the admission in such professional colleges to the highest 'bidders', irrespective of their relative rank order in merit/enterance tests. Private enterprise in Andhra Pradesh found it as the most lucrative offer ever available to make quick profits, and moved fast into action, and 12 new medical colleges and eight dental colleges are being set up. From the students in Andhra Pradesh it is learnt that these 50 percent seats are being filled at the rate of Rs. 5 lakhs each, besides the tuition fee of Rs. 10,000 per annum, as allowed by the Government, as against Rs. 500-1600 in government colleges. Now the Andhra Pradesh High Court has stayed admissions into the medical colleges that were scheduled to be made between August 15 and 30, 1992.[8]

In sum, the capitation fee colleges have become a stigma on the Indian educational scene. They reflect "one of the most shameful aspects of the country's elite-dominated culture"[9] They are a testimony to the fact that Indian system is not yet ready for marketisation. The conditions necessary for smooth functioning of market method are yet to be achieved. Probably in no country in the world, including even in the market economies like the USA, and Japan where private higher education is substantial in quantum, there is any thing comparable to the Indian capitation fee system. The fees in private universities in USA were about 5 times the fees in public universities, and the corresponding ratio was 2.5 in Japan (*Tilak*, 1991). There cannot be any second opinion on the capitation fees in India that form more than 100 times the fees in government colleges.

The Government of India is aware of all this. For instance, the Government of India (1985, p. 98) observed: "A large number of technical colleges have come up which charge sizeable capitation fee for admissions. There is a strong feeling that their activities should be curbed because they are providing access to education on the basis of economic status of the guardians and not on the basis of merit." The Government of Andhra

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[5] For example, the growth of these private colleges is found to be against the recommendations of the professional bodies like the Indian Medical Association, regarding the supply of and demand for manpower.

[6] See Rekha Kaul (1990) for a detailed description of the problems involved in case of capitation fee colleges in Karnataka.

[7] See Economic and Political Weekly, May 30, 1992.

[8] Times of India (New Delhi, August 8, 1992)

[9] "Money and Merit," Editorial, Times of India (New Delhi, 3 August, 1992).

Pradesh (Telugu Desam Party) banned collection of capitation fees; and the Government of Karnataka (Janata Party) had also banned in 1984. But they have no effect. Paradoxically at the same time the government is found encouraging the growth of such colleges. Why are the policies of the government not in consonance with its own diagnostic perceptions and intentions explicitly made in their Acts? Why do the *acts* and *Acts* of the government differ? Kothari (1986, p. 594) provides the answer: "there has come into existence a class of rich and well-to-do people consisting of politicians, top bureaucrats, business executives, small and big industrialists, traders, businessmen, technocrats, professionals in independent private practice and large land holders which is able to pay capitation fee and high recurring fees. It is pressure from these people, which has resulted in the relaxation of the government policy." Caste, community and class dynamics with the connivance of the politicians and bureaucracy, define the contours of professional education in India.[10] Such an amoral and vulgar form of marketisation will not be tolerated even by the ardent proponents of marketisation in India.

However, both the Acts of the two state governments, as well as the Supreme Court judgement mentioned above referred to 'differential' fee system, which should be examined in detail. There are two broad levels of differentiation: one between government and private colleges; and second between different groups of students within the private colleges. First the second one. In the case of the Karnataka Act, differentiation is made between Karnataka students and Indian non-Karnataka students. Origins of this differentiation can be found in the other countries (e.g., in England), where differentiation is made between natives and foreigners, the students of the latter category being charged full costs as fees, while the education of the natives is subsidized by the state. The Supreme Court also opined, referring to an earlier judgement, that since education was a *State subject*, states could make such differentiation in principle. "It is quite a legitimate and laudable objective for a State to encourage education within its borders." Differentiation based on 'ground of residence' was found to be valid. The relevant question is whether it is desirable and/or justified, in the context of development of education in the country.[11] Such a pattern of differentiation restricts the mobility of the students within India, which may not be desirable particularly at higher – higher professional – level. The view that the native graduates of these professional colleges will be confined to their own states, and "serve the needs of the locality" may not be tenable. However, the Court does not seem to favour differential fees based on residence.

With respect to differentiation between government and private colleges, the Supreme Court felt that there cannot be any differentiation in fees: "If the State Government fixes Rs. 2000 per annum as the tuition fee in government colleges and for 'Government seats' in private colleges then it is the state responsibility to see that any private college which has been set up with government permission and is being run with Government recognition is prohibited from charging more than Rs. 2000 from any student who may be resident of any part of India." In other words, the private colleges cannot charge higher fees than government colleges.[12]

On the whole, the admission of students and their differentiation do not seem to be based on the 'merit' of the students. Those who cannot secure admission on the basis of merit, are allowed to purchase education. The ability to pay, and not the merit determines the admission, which is highly harmful for the protection, not to speak of improvement, of standards in higher education. But differentiation may be made based on the ability to pay.

Policy Measures

In the whole context of stagnating and declining budgets on the one hand, and the increasing demand for higher professional education on the other, one may think of a few pragmatic policy measures, that can be viewed more as a package, rather than as separate ones:

1. There is no justification for capitation fee colleges at all. Capitation fee has to be totally prohibited. Prohibition by law is not adequate. Serious concerted effort should be made to uproot this evil from the Indian system altogether.

2. Private enterprises who cannot make their own substantial capital investment in education out of genuine philanthropic motives, may not be allowed to open colleges; they can as well go to formal 'profit-making' sector to realize their objectives. Education should not be made a 'quick and high profit' making enterprise. In other words, the private management in education must make capital investment on their own, which cannot be recovered from the students, and can recover at best the recurring costs of providing education from the students as fee, and not as huge capitation fee. It must be emphasized that the recurring cost of providing higher professional education in India is not very high (*see* Table 2), and that many students will be able to pay.

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[10] See Kaul (1990) for more details on Karnataka.

[11] It has to be noted that education is a **concurrent subject** and the Union Government does provide considerable grants to states for higher education. For example, the Eighth Five Year Plan provides for Rs. 700 crores for higher education in the country by the central government. But the capitation fee colleges do not receive any state/central government grants.

[12] This will have serious implications at all levels of education. All private aided and unaided institutions, inlcuding schools, cannot charge fees higher than the fees charged in government institutions.

Table 2

Recurring Costs and Fees in Higher Professional Education 1983-84

Selected Disciplines (Colleges : Degree Standard and Above)

	Engineering & Tech.	Medicine	Business Management
Rs. per Pupil			
Recurring Cost	4,610	9,162	12,221
Fees	729	588	1,496
Direct Subsidies*	239	594	186
Net Fees**	490	– 6	1,310
As % of Cost			
Fees	15.8	6.4	12.2
Subsidies*	5.2	6.5	1.5
Net Fees**	10.6	– 0.1	9.5

Note : *Scholarships, stipends etc. **Fee minus Subsidies.

Source : Tilak (1993).

3. With respect to differentiation, the best option, that is in "consonance with fair play and equity", is to give admission strictly based on merit and merit alone, determined on the basis of the common entrance test – common for all government and private colleges, as is the practice in some states. Then there are three alternative available:

(a) Those who qualified in the merit list can be divided into three or four categories based on their ability to pay, and they can be differentially charged accordingly, the more able being asked to pay a higher proportion of recurrent cost as fees, and the less able a lower proportion, whether they are admitted in the government or private colleges.[13]

(b) Alternatively, government colleges that provide highly subsidized education, may give admission to the most meritorious students, and the remaining students qualified in the merit list, can be admitted in private colleges and should be differentially charged based on the ability to pay of the students.

(c) Alternatively, all the students figured in the merit list may be given a choice to join any college – government or private. As the government colleges provide subsidized education, and the private colleges charge high fees, *ceteris paribus*, most meritorious students automatically prefer to go to government colleges, and the less meritorious students may have no choice but to go to private colleges, as stated in (b) above. However, the alternative (c) gives a choice to the more meritorious students who are better able to pay to go to private colleges, if the quality in a private college is higher, or due to any other reasons like proximity.

It is clear that alternative (a) above would be more tenable than the others, given the Supreme Court judgement that fees should be the same in government and private colleges. Further, under any of these alternatives (a, b, or c) those who cannot pay should be provided almost tuition free higher professional education, irrespective of the fact whether they are admitted in government or private colleges. In the government colleges they would be provided free studentships, and if they are in private colleges, the government should evolve suitable measures to take care of their costs – through direct scholarships to students, or through grants to the colleges to the tune of tuition costs of those students.

4. Lastly, given the experience of other countries, differentiation between native and foreign students can however be made, the latter ones being asked to pay full cost of their education, both in government and private colleges.

With respect to all the three proposals, it should be noted that the fees should be related to realistic estimates of unit costs of education, preferably recurring costs alone. In case of the second proposal, in addition, it should be related to reliable estimates of ability to pay of the students.

(The views expressed here, are those of the author alone, and are not necessarily shared by the Institute, which he serves.)

References

Government of India (1985) **Challenge of Education: A Policy Perspective.** New Delhi: Ministry of Education.

Kaul, Rekha (1990) **Interaction between State and Private Interests in Higher Education: A Study of Professional Colleges in Karnataka.** Delhi: Delhi University, unpublished Ph.D. Thesis.

Kothari, V.N. (1986) "Private Unaided Engineering and Medical Colleges: Consequences of Misguided Policy, " **Economic and Political Weekly** 21 (14) 5 April: 593-96.

Nair, R.G., and Ajit, D. (1984) "Parallel Colleges in Kerala," **Economic and Political Weekly** 19 (42-43) 20-27 October : 1840-47.

Psacharopoulos, G., and Woodhall, M. (1985) **Education for Development.** New York: Oxford/World Bank.

Shatrugna, M. (1988) "Privatizing Higher Education" **Economic and Political Weekly** 23(5) 10 Demember : 2624-26.

Shatrugna, M. (1992) "Decks Cleared for Capitation Fee Colleges,"**Economic and Political Weekly** 27(22) May 30: 1118-19.

Singh, N. (1983) **Education Under Siege**, New Delhi: Concept.

Supreme Court of India (1992) "Miss Mohini Jain versus State of Karnataka & Others. " New Delhi (30 July 1992).

Tilak, J.B.G. (1990) **Political Economy of Education in India.** Buffalo: State University of New York.'

Tilak J.B.G (1991) **"Privatization of Higher Education,"** Prospects : Quarterly Review of Education (Unesco) 21 (2) 78 : 227-39.

Tilak J.B.G (1993) "Financing Higher Education in India", in **Higher Education Reforms in India** (eds. S. Chitnis and P.G. Altbach), New Delhi: Sage, in press.

Tilak, J.B.G. and Varghese, N.V. (1985) "Discriminatory Pricing in Education." Occasional Paper No. 8. New Delhi: National Institute of Educational Planning and Administration.

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[13] Tilak and Varghese (1985) outlined a generalized framework of discriminatory pricing in higher education, based on ability to pay and the recurring cost of education.

The Meaning of Education for Equality

Anuradha Dutta*

The Democratic Ideal

It has now been increasingly accepted that all human beings have a right to equal facilities of some kind or the other. But to what kind of equal facilities do they have a right? Herein come the words 'democratic' and 'democracy' which connote certain social ideals. Democracy came to be associated with a set of ideals as well as a form of Government. The democratic ideal was accepted precisely because the thought was that all citizens equally had a claim to self-direction, although regulated in some cases for the common good. Belief in self-direction was belief in a right to liberty and equality. Thus the thinking arose that there should be equality of opportunity in education, equality between the sexes not only in political matters but also in regard to opportunity for social advance. Political matters include having the right to vote, legal rights to property, etc.; economic matters include having the right to employment, equal pay for equal work, opportunity for career advancement, etc.; social rights include equality of opportunity in education when it is regarded as of crucial importance for national development. When the democratic ideals are accepted, it goes without saying that liberty and equality are to be regarded as accepted values in all sphere of community and social life. As a scholar suggests, these values may have to be qualified for the sake of other values, but then they remain values to be taken into account.[1]

Rousseau had a passionate belief in human liberty, to the extent of saying that 'to renounce one's liberty is to renounce one's quality as a man, the rights and also the duties of humanity'. He stressed how important equality was to human beings. Further, he stressed that inequality produced injustice and the foundations of disharmony. In the American Declaration of Independence, it is said that 'all men are born equal'. Rousseau saw order produced as a result of enjoyment of equal rights. He believed that the rulers and the ruled become the same when the collective benefit is equal to the general will. In his novel *The New Heloise* (1761) he proposed spiritual refreshment through a return to nature. After the birth of the civil society, however, it is simply not possible to return to a state of nature. Therefore, the civil society seeks solution to problems not by harking back to Rousseau's utopia but through assertion of legitimate rights. Hence it is relevant to turn to the American Declaration of Independence, the slogan of the French Revolution of 1789 – 'Liberty, Equality, Fraternity,' the Preamble to the Indian Constitution and the values enshrined therein etc.

The statements 'All men are equal' or 'All men are born equal' are meant primarily as a statement of right. It is common knowledge that men and women are unequal in capacities, in physical strength, in matters relating to the cultivation of the brain; they are unequal even in matters of appearance. Nature has endowed men and women differently as individuals to show their mettle as human beings. Therefore, the statement 'All men are equal' or 'All men are born equal' is to be understood as all human beings having a right to equal treatment.[2] Equal treatment may not be in all respects and in all circumstances. A scholar offered three suggestions in regard to equal treatment of all human beings : that the right to equality is a right to equal *consideration;* that it is a right to equal *opportunity;* and, that it is a right to the equal satisfaction of basic *needs*.[3]

The Track Record

In the decades after Independence, there has been utter failure to eradicate illiteracy or to universalise elementary education in terms of Art. 45 of the Constitution; this Article provided that 'within a period of ten years from the commencement of the Constitution, that is by 1960, the State shall endeavour to provide for free and compulsory education for all children until they complete the age of fourteen years'. Many other Articles figuring under the Directive Principles of State Policy proclaiming socio-economic benefits have equally been neglected. All this has widened the gap between the rich and the poor in their access to adequate education. Acharya Ramamurti Committee's 'A Perspective Paper on Education' noted in September, 1990[4] : 'Almost half of the children in the age group of 6 to 14 either do not enter the school at all or drop out at an early stage. Of these, according to a recent National Sample Survey, about one third to one-half find school either boring, irrelevant, or threatening (i.e., failure in examinations). Almost another 40 to 45% of them have to stay away from School due to strong economic compulsions and the demands of home and family life. Only about 5% of the children manage to reach the higher secondary stage and a smaller percentage go on to higher education'. The 1985 *Challenge of Education* document noted that if there be no change in the rate of growth of population and the rate of spread of literacy, 'there would be 500 million illiterates in India in the year 2000 A.D.' According to the World Bank, in that year, 54 percent of the World's illiterate population in the age-group 15-19, would be in India.[5] As of now, out of every 10 million illiterates in the world, 5 million are Indians. This means that approximately 50 percent of the world's illiterates are Indians. The country's literacy rate is 52.11 percent (Males 63.86 percent, Females 39.42 percent) as per the 1991 Census. And a 1991 Census report shows that out of every 10 illiterates in India, 7 are women.[6] Thus, we

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have a long way to go for realising the goal of equalisation of opportunities.

It is not that the country's educationists, experts engaged in academic planning and other academics did not point out in time the realities of the situation. Fifteen years after independence, an Education Commission headed by Prof. D.S. Kothari was specifically requested to : (i) re-evaluate the role of education in the total programme of national development, and (ii) to identify the changes called for in the existing system of education if it were to play its appropriate role in national development. The Report of the Education Commission (1964-66) : *Education and National Development* is a very valuable and comprehensive document. The 1968 Education Policy was based on it. But the fact remained that even accepted policies were not implemented with the result that Government of India had to feel the necessity for a new national policy on education (NPE), 1986. The NPE document frankly admitted '... the general formulation incorporated in the 1968 policy did not, however, get translated into a detailed strategy of implementation, accompanied by the assignment of specific responsibilities and financial and organisational support. As a result, problems of access, quality, quantity, utility and financial outlay, accumulated over the years, have now assumed such massive proportions that they must be backed with the utmost urgency'.[7]

Revolution in Education

The monumental document of the Kothari Commission (Education Commission) analysed the failure of the education system in transforming the social structure with a view to building a new society and recommended an 'educational revolution' ...... 'the present system of education, designed to meet the needs of an imperial administration within the limitations set by a feudal and traditional society, will need radical changes if it is to meet the purposes of a modernizing democratic and socialist society..... changes in objectives, in content, in teaching methods, in programmes, in the size and composition of the student body, in the selection and professional preparation of teachers and in organization. In fact, what is needed is a revolution in education which in turn will set in motion the desired social, economic and cultural revolution'.[8] What the Education Commission wanted as the most important and urgent reform was to transform education into a powerful instrument for achieving social, economic and cultural transformation for the realization of India's national goals. In its view, this could be done if education'.... is related to productivity; strengthens social and national integration; consolidates democracy as a form of government and helps the country to adopt it as a way of life; hastens the process of modernization; and strive to build character by cultivating social, moral and spiritual values'.[9]

The Commission emphasised that all the above issues are interrelated and that in the complex process of social change, 'we cannot achieve even one without striving for all'.[10] It gave the pride of place to education because of its considered view that 'it is the responsibility of the educational system to bring the different social classes and groups together and thus promote the emergence of an egalitarian and integrated society. But at present instead of doing so, education itself is tending to increase social segregation and to perpetuate and widen class distinctions...... What is worse, this segregation is increasing and tending to widen the gulf between the classes and the masses'.[11]

Womens's Equality

However, even while emphasising in the clearest possible terms the key role of education for the realization of national goals, the Kothari Commission did not apply its mind critically to studying the role of education in the specific context of achieving women's equality. The existing social order is maintained also on the basis of continuing women's subordination in many fields of social activities. Developing a women specific component of national development was never thought of. However, this task was first performed by the Report of the Committee on the Status of Women in India headed by Smt. Phulrenu Guha. The report, *Towards Equality* laid the right emphasis on equality of sexes as a major value to be inculcated through the educational process. Thus, the committee on the Status of Women noted that from early childhood boys and girls were indoctrinated to accept gender inequality, and observed that the only institution which could contract the effect of this kind of traditional socialisation process was the education system. In the committee's view 'If education is to promote equality for women, it must make a deliberate, planned and sustained effort so that the new value of equality of the sexes can replace the traditional value of inequality. The educational system today has not even attempted to undertake this responsibility. In fact, the schools reflect and strengthen the traditional prejudices of inequality through their curricula, the classification of subjects on the basis of sex and the unwritten code of conduct enforced on their pupils'.[12] The *Towards Equality* report of 1974 had a decisive impact on the prevailing situation in that women's associations, activist organisations and academic bodies came to apply their mind seriously towards the emergence of a new discipline, i.e. Women's Studies and education for women's equality. The issue occupies a significant place in its own right in the context of education for equality.

Part IV of the National Policy on Education (NPE) 1986 is addressed to 'Education for Equality'. It promised laying special emphasis 'on the removal of disparities and to equalise educational opportunity by attending to the specific needs of those who have been denied equality so far'. Thus it called for satisfying the specific needs of those who had been educationally disadvantaged, that is women, scheduled castes and scheduled tribes, minorities and the handicapped. Paragraphs 4.2 to 4.12 have detailed various measures for implementation. 4.2 and 4.3 relate to education for women's equality. The NPE says 'Education will be used as an agent of basic change in the status of women... The national education system will play a positive, interventionist role in the empowerment of women. It will foster the development of new values through redesigned curricula, textbooks, the training and orientation of teachers, decision makers and administrators, and the active involvement of education institutions. This will be an act of faith and social engineering. Women's studies will be promoted as a part of various courses and educational institutions encouraged to take up active programmes to further women's development'.[13]

We are approaching close to six years since the NPE of 1986, and yet, many reforms are yet to be introduced, mainly due to the admitted resource crunch. Meanwhile, when a different Government came to be installed at the Centre, it announced the appointment on 7 May 1990 of a committee headed by Acharya Ramamurti to review the National Policy on Education (NPE), 1986. Government of India's resolution constituting the committee stated *inter alia* that 'Government accords the highest priority to education both as a human right and as the means for bringing about a transformation towards more humane and enlightened society'.[14] Questions were asked as to why this hurry in making a review even before the expiry of the stipulated period of five years. Acharya Ramamurti explained the 'basic concerns' that motivatd the appointment of the review committee : 'One, the Right to Work which is proposed to be enshrined in the Constitution; two, the unity and integrity of the nation that are seriously threatened; and three, the impoverishment of the inner man in India'.[15] The Government that appointed committee fell from power without completing even one year. And now we have had a review of the Review Committee's Report.

Whatever might be the fate of reviews, it would not be in the interest of education to scuttle programmes like 'education for equality' envisaged in NPE. The document acknowledged that 'Education is a unique investment in the present and the future. This cardinal principle is the key to the National Policy on Education'.[16] The Kothari Commission recommended 'if education is to develop adequately, the proportion of GNP (Gross National Product) allocated to education should rise from 2.9 percent in 1965-66 to 6.0 percent in 1985-86'.[17] But even now the proportion is as it stood in 1965-66, i.e, more than a quarter of a century back. The dismal state of affairs is pinpointed in a very telling way by the Ramamurti Committee's perspective paper on Education; it says that India ranks 115th amongst the countries of the World in terms of investment in education as percentage of GNP; 'for a people that set such store by knowledge as a means of liberation, (*sa vidya ya vimuktaye*) this is indeed a strange paradox'.[18] But stranger is the paradox when we find that the Ramamurti Committee itself could not recommend a higher percentage in its own perspective paper. The paper said : 'Strategies for augmenting resources for education and distribution of the same would need to be : a significant increase in public expenditure – at least 6% of the GNP; substantially larger allocation in the central as well as state budgets; etc......'[19]

Stating that the country now stands on the threshold of the twenty first century, the *Challenge of Education* document highlighted the fact that those who are being born now will finish their schooling at the turn of the century and enter a world offering unprecedented opportunities in the history of the humankind.[20] In the Ramamurti Committee's view, what is of tremendous importance is to ensure that all children receive school education in this decade in order that they do not grow into illiterate adults in the next century.[21] These are unexceptionable statements of facts, reasonable sentiments and recommendations. But what is of far greater importance is to provide urgently necessary resources on a top priority basis for education to honour the commitment of the powers that education is a unique investment in the present and the future. Education for equality could become a meaningful exercise only if there is the political will to act by releasing adequate resources and implementing accepted measures aimed at doing away with the gulf between the classes and the masses!

References

1. Raphael, D.D. **Problems of Political Philosophy.** Revised edition. London, Macmillan press, 1976, pp. 142-44.
2. **Ibid**, p. 184
3. **Ibid**, p. 186
4. **Towards an Enlightened and Human Society : A Perspective Paper Education** (Committee for Review of National Policy on Education (NPE) 1986, New Delhi, September 1990), p.2.
5. **Challenge of Education – a policy perspective,** (Ministry of Education, Government of India, New Delhi, August 1985), p.41 para 3.17
6. Figure from Delhi Saksharata Samiti, cited in **Women's Equality** (Delhi), Vol. IV No. 3 July-September 1991.
7. Report of the Education Commission (1964-66) : **Education and National Development** (Ministry of Education, Govt. of India, 1966), p.4, para 1.17.
8. **Ibid.**
9. **Ibid.**, p.6, para 1.20
10. **Ibid.**
11. **Ibid**,. p. 10 para 1.36.
12. **Towards Equality** : Report of the Committee on the Status of Woman in India (Govt. of India Department of Social Welfare : Ministry of Education and Social Welfare. New Delhi, December 1974), p. 282, para 6.109.
13. NPE document cited above, p.6.
14 Ramamurti Committee's perspective paper on Education pp. 1-2.
15. **Ibid.**, p. (i).
16. NPE document, pp. 3-4.
17. Report of the Education Commission (1964-66), p.672, recommendation no. 223.
18. Ramamurti Committee's perspective paper on Education, p. 6.
19. **Ibid.**, p. 33.
20. **Challenge of Education**, p.1.
21. Ramamurti Committee's perspective paper on Education. p. 4

The Politics of Excellence and Choice in Education

Gitika Dutta Dhupkar*

There is a lot written these days about excellence in education, a lot of debate and a lot of planning is going on. But one question that eludes (and most try to elude) is the question, what is excellence in education and more importantly, who decides what is this excellence to be? There is also the danger, when we say education as human resource development without defining what is this 'human' in education and what is this 'resource development' for which one is to be educated. Here lies the trap, and I feel we are badly caught in this trap of mass hypnotism of what is excellence in education and are gravitating along with economic and political direction of excellence in education. Here we have lost track also of the fact of excellence movement, the concern for choice, diversity and individuality in education, which goes along with many conceptions of what is required for educational excellence.

Agreed, that education is an investment of a nation for renewed social purpose and hence, focus of governmental attention; however, this renewed attention also raises some thorny issues such as choice, balance, constraints and excellence in education. The crucial question for all those who are interested in education in the broader sense of the words, can we reinvigorate educational institutions by constraining them to such a degree that they become merely an arm of the nation? For although education by its nature is a social activity, involving significant side effect, it does not merely change the social situation, it also changes the individual, it may subordinate or elevate him.

This human capital theory although argues that there are positive economic side effects of people gaining more education due to increased economic productivity, and these benefits are not gained solely by individual being educated; in this case, education may only facilitate economic growth if it is consonant with the job market, rather that producing mere graduates and postgraduates, who have not intrinsic motivation for education and excellence, but also remain unemployed (as is the present situation).

While the market approach may have ideological appeal, the question is, how applicable is it to education? Can it bring efficiency and excellence to educational consumers? Market approach emphasizes learning with a specific end, and this marginal success may not call for academic excellence and that, local, marginal advantage may not result in global success. Hence choices in education are different from those idealized in the economic theory of market education. An educational theory based on 'rational consumer', which uses the 'markets are responsive' argument will then be misleading in educational situations because of short and long run, and extrinsic and intrinsic motivation in education can be in conflict, and also contradictory. Here not only the objectives of teaching change, the curriculum too is based on this market achievement rather than on the basis of broader intellectual or instructional quality, and consequently, the test scores too are geared to this purpose. It is no wonder that, while test scores are going up higher and higher, meaningful educational improvement and standards are taking a back seat.

Politics of Excellence

Under the politics of excellence, what we have failed to grasp is that we have superimposed the concept of human resource development as synonymous with the economic and political man's construct. What is needed for a functionally efficient economic and political man is entirely different from the construct of what is needed to be a fully functioning individual of excellence. And there is the fear of a misleading paradigm of an inappropriate construct for several reasons, for our global experience should remind us that measuring man based exclusively political and economic construct has never succeeded in the making of a man. Machiavelli's political man cosntruct, long preceded Adam Smith's economic man, its self interest drive was at least as powerful as economic man viewed by public choice model. That view has been common not only in the western society, but also in ours – although we preach that we teach for democracy, we forget that the ways in which self interest works in our mass democracy differ from the interest of the market place and consequently also the notion of excellence. For excellence in education is only one of a number of indicators, which have their referent the predominant value premises guiding economic and political policies. Hence the excellence slogan in our country has become a symbol of productivity in industrial and economic terms, with application to meritocratic values in education, while other indicators correlated with excellence as achievement, merit, quality and international standard are missed out. What is exclusively emphasized is a powerful political shift in education, and given the connotation and low denotation of quality of effective ideologies in political brain pan, one should expect excellence to be ill-defined, leaving the meaning of it open to public respondent. To mention one, the shift from excellence to equality which our political creed places is a new ranking of democratic values. Hence, setting a new educational agenda based on the pervasive qualities and depth of a political decision are bound to lead to irresolvable issues and conflicts likely to destroy the educational culture.

And this is exactly what has happened. The economic and political trends have affected social policies and have produced far flung consequences for educational policy. Thus in our educational landscape, the pursuit

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of excellence has replaced equity as the leading goal of education, and this politics in education has proved to be anti "excellence", and regulated a trend towards where excellence takes over a new criteria, a quasi-market mechanism rather than educational achievement. This politics of excellence also redefines quality in the name of raising standards in the pursuit of excellence, as a mere contrivance for moulding people to be exactly like one another, and the mould in which it casts them is that which pleases the predominant power; it establishes a despotism over mind. They have an organizing and consistency function and work upon emotion, maintain a unity, and coordinate activities for common effect at the cost of personal identity and worth, and even the most sophisticated public opinion is misled by this bureaucracy of excellence.

Bureaucratic Approach

This brueaucratic approach implicitly assumes that the optimal solution to a collective problem will leave the individual better off, but this collective basis of education can be so draconian, so limited of individuals, options and growth of excellence. Because this approach adopts one sided liner strategy which attends to one facet of the overall problem to the neglect of others, it is likely to produce undesirable and unanticipated consequences.

Thus, it may be said that the policies being pursued in the name of excellence frequently are at odds with both the contemporary implications of educational excellence and the conditions necessary for it. However, there is a mounting national concern, and an disillusionment and widespread failure, in the educational establishment to appreciate this politics of excellence, and with its standardization and centralization of education. The increasing tension between the competing approaches to educational excellence appears to be between the centralizers and diversifiers.

Hence, this requires a fuller exploration of the metaphor of community, with its emphasis on a Janus faced concern for both public and private which may provide a salutary corrective to the unilateral stance of the market metaphor. Such a metaphor does not eliminate concern for a sphere of individual autonomous action, or one of public planning and constraints. Both of these placed in a different light make neither an end unto itself. And this is possible only when the politics of excellence stops defining excellence as a whore in the educational market.

In conclusion, we may follow Dewey, who proposed a way of handling the interplay of individual and social goals when he asked : "Why then should it be thought that one must take choice between sacrificing himself to doing useful things for others, or sacrificing them to pursuit of his own exclusive ends.......? What happens is that, since neither of these things is persistently possible we get a compromise and an alternation. One tries each course by turn". (John Dewey (1966 b), 'Natural Development and Social Efficiency as aims' in, *Democracy and Education*, New York : Free Press.)

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ADULT EDUCATION IN THE EIGHTH PLAN

SOME ISSUES

S.Y. Shah*

The Context

The Eighth Five Year Plan has been launched against the background of significant changes caused by an array of national and international events. While the breakup of the Soviet Union and the impact of the Gulf War had brought down India's foreign trade and revenue, the continuation of loss making public sector undertakings has been straining the exchequer. Apart from the resource crunch, the Plan had to take into account the policy of liberalisation of Indian economy and the increasing role of private sector. Notwithstanding the growth of Indian economy at the rate of 5.5 percent per annum as compared to 3.5 percent witnessed during the three previous decades, and the significant reduction of people living below the poverty line from 48.3 percent in 1977-78 to 29.9 percent in 1987-88; the enormous increase in the growth of Indian population at the rate of 2.1 percent per annum resulting in 844 million in 1991, has considerably watered down the gains of the earlier plan efforts. Besides, the growing urbanisation and the large scale unemployment caused by the slow growth of employment at a rate of 2.2 percent per annum compared to 2.5 of labour force, wide disparities in access to the basic amenities of life like health care, drinking water, primary education and the increasing social tensions generated by the communal, and terrorist activities have been posing serious challenges to the formulation as well as implementation of the plan. "The imperatives of the growth in the face of these challenges require an innovative approach to development which is based on a re-examination and re-orientation of the role of government, the harnessing of the latent energies of people through people's involvement in the process of nation building and creation of an environment which encourages and builds up people's initiative rather than dependence on the government."

Thrust Areas in Education

The ultimate focus of the Eighth Plan being on human development, considerable importance has been laid on education, health, population control, employment generation and creation of appropriate organisations and delivery system to ensure that the benefits of investment in the social sector reaches the intended beneficiaries. In the education sector, apart from elementary, adult and vocational education have been identified as the major thrust areas and accordingly universalisation of elementary education, eradication of illiteracy in 15-35 age group, and vocationalisation of higher secondary education remain as the three priority objectives of the Eighth Plan. In regard to literacy, the emphasis would be on sustainability of literacy skills gained and on the achievement of goals of remediation, continuation and application of skills to actual living and working conditions".

Achievement of these objectives not only depends on the objective assessment of the targets but also on the adoption of appropriate strategies and allocation of adequate outlays. In the case of adult education it is estimated that 11.08 crore illiterates in 15-35 age group would have to be covered by the end of the Eighth Plan to achieve hundred percent adult literacy. Though the target seems to be ambitious yet it is very much within the realm of possibility given the increasing trend of coverage under the Total Literacy Campaigns, special support provided through a number of centrally sponsored schemes like Rural Functional Literacy (RFL) projects, Post Literacy and Continuing Education, Non-formal Education, strengthening of administrative infrastructure and technical resource support at national, state and district levels, increasing role of non-governmental organisations, massive participation of people from all sections of society, mobilisation of resources from the local community and an enhanced allocation for the adult and elementary education in the Eighth Plan.

Targets and Trend of Coverage

A review of the Eighth Five Year Plan document of different states and union territories reveals that of the 11.08 crore illiterates to be covered during the Eighth Plan, 10.99 crores are in the state sector and the remaining in the union territories. Among the states the bulk of illiterates are in Uttar Pradesh(1.67 crores), Orissa(1.3 crores), Bihar(0.94 crores), Rajasthan(0.93 crores) and Madhya Pradesh(0.86 crores) which together constitute more than 50 percent of the illiterates in the country (*see* Table No. 1). A closer examination of the Plan documents of these states, however, reveals that none of them have realised the implications of 100 percent coverage of illiterates in their respective states during the Plan period. While the proposed target in U.P. constitutes only 76.4 percent of the total estimated illiterates in 15-35 age group, in Bihar it is only 65.8 percent. While there has been considerable underestimation of targets in large States like U.P. and Bihar, in some states like Rajasthan and orissa there is an overestimation. This may be probably

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due to lack of access to data base by the respective state governments.

To elaborate further, during the Eighth Plan, the Government of U.P. proposes to cover 167 lakh illiterates under adult education programme. However, according to 1991 census, the total population in U.P. is 1390 lakhs of which illiterates constitute 655.46 lakhs. Assuming that 1/3rd will be in the age group of 15-35, the proposed target is likely to be 218.48 lakhs (*see* Table No. 2). These State government has already covered a target of 23.61 lakhs during the Annual Plan 1991-92. Hence, to achieve 100 percent literacy, the actual target to be covered during the Eighth Plan will be in the range of 194.87 lakhs. This suggests the need for massive expansion of adult education programmes in the states. Due to various socio-political factors, the state government has been rather slow in switching over to the total literacy campaign approach. As on 31.7.1992, the State has launched only five total literacy campaigns at Fatehpur, Meerut, Chamoli, Dehradun and Almora. During the Eighth Plan the state proposes to take up total literacy campaigns in 20 districts, and at this rate it would require stepped up efforts to achieve 100 percent literacy.

The slow progress of total literacy campaigns in Fatehpur and Meerut – presumably due to various socio-political factors, the comparatively large number of districts in U.P.(63) and their larger size and the relative backwardness in terms of low literacy rate in general and among the females in particular, low enrollment ratio at the primary stage, high percentage of never enrolled children and huge dropouts, large number of people living below poverty line, weak voluntary base and institutional support suggest the need for a variety of innovative strategies to tackle the problems of illiteracy in a big and backward state like U.P. Besides, the states of Bihar and Rajasthan also belong to the same category. As is evident from Table No. 3, the literacy rate in Rajasthan and Bihar is 38.81 percent and 38.54 percent respectively as against the national average of 52.11 percent. In terms of female literacy, Rajasthan(20.84 percent) and Bihar(23.10) are the lowest among the states. The dropout rate at the primary levels in these states is also highest in the country i.e. 65.63 and 52.25 compared to the all India rate of 46.97. Besides, in Bihar 66.6 percent of 6-11 age group of children in rural areas are never enrolled in schools. As against 29.9 percent of people living below the poverty line in India, in Bihar 40.8 percent people belong to this strata (for details *see* Table No. 3). With the exception of Rajasthan, the other states of Bihar and Uttar Pradesh propose to cover a limited target ranging from 65-76 percent of illiterates. These states have also lagged behind in launching Total Literacy Campaigns.

The trend of coverage of the target of adult education programmes during the Seventh Plan and the last two Annual Plans indicate that it is difficult to cover 100 percent target in the near future unless most strenuous efforts would be made. As against the target of covering 3.84 crore adults during the Seventh Plan, actual coverage was only 2.35 crores (61 percent). During 1990-91 as against the target of covering 1.30 crores, the achievement was 0.82 crores (63%). There was no substantial change in the target or achievement of adult education programme during the next year.

Literacy Campaign as a Dominant Strategy

The success of the literacy campaign in achieving total literacy in as many as 22 districts (as on 31.3.92) seems to have strengthened the confidence of policy planners and administrators in replicating it in 75 percent of the districts (345) by the end of the Eighth Plan. Though the campaign has been projected as the dominant strategy and it has been in operation in as many as 156 districts (as on 30th August, 1992), the plan does recognise the need for a variety of strategies. It is mainly due to the uneven levels of development and wide disparity in literacy rate among different regions of India. Accordingly, the Plan proposes to cover 80 percent of the target through Campaigns and the remaining through MPFL, NYK's and RFLPs. In tribal, hilly and sparsely populated areas though the Plan has suggested the possibility of retaining the centre-based programme, in general, it has not supported the continuation of the programme. To quote the Plan, "The strategy for backward districts could be two-fold : first a few blocks could be selected where the literacy campaign can achieve success within a reasonable period. The demonstration effect of the blocks would influence the backward blocks which in course of time could develop appropriate literacy programmes. Secondly, the voluntary base in educationally backward districts being somewhat weak, the ways and means of identification, strenghtening and expansion of the same would be evolved in consultation with the respective state governments".

Keeping in view the voluntary character of the expanding literacy movement and the drawbacks of the centre-based programme as brought out by several evaluation studies in the past, it would be desirable to design an innovative programme for backward areas which could be area specific, cost effective and in tune with the voluntary character of Total Literacy Campaigns. The Plan's emphasis on the decentralised approach demands that such a programme be designed and managed by local education committees.

With the launching of Total Literacy Campaigns in 75 percent of districts and gradual phasing out of the centre-based programme large number of paid literacy instructors may have to forego their honorarium and switch over to voluntary work which may not be easily acceptable to many. Since the success of future literacy campaign is likely to be influenced by the cooperation of the former paid workers, it would be very essential either to prepare them well for the voluntary work or utilise their services in some other development programmes.

Strengthening of Institutions

The Plan has highlighted the need for developing long term strategic vision which in the case of adult education implies the expansion of life long education and building up of permanent institutional infrastructure at various levels. While the plan has suggested the phasing out of the National Directorate of Adult Education by 1997, it has supported the idea of developing the National Institute of Adult Education as an apex organisation and also strengthening the State Resource Centres. While the strengthening of National Institute of Adult Education (NIAE), State Resource Centres (SRCs) and Jan Shikshan Nilayam (JSNs) are positive steps which would be welcomed by the adult educators, the gradual phasing out of the Directorate of Adult Education may be problematic unless the concerned members of staff are taken into confidence. Had the Directorate of Adult Education been converted and expanded into NIAE as had been originally recommended by the Task Force, then there would have been no overlapping of functioning or duplication of infrastructural facilities of the two institutions. Now, should these two institutions be merged into one? Perhaps not. Unlike DAE, which was set up as a subordinate office of the Department of Education, NIAE has been envisaged as an autonomous professionally competent and compact institute and hence merging the two may be a retrograde step.

The issue of DAE vis-a-vis NIAE becomes clear when it is examined in a historical perspective. The National Fundamental Education Centre which was established as an apex research and training institution in adult education in 1950s became a Department of Adult Education of NCERT in 60s and folded up early in 1970s when the DAE was established. By suggesting the closure of DAE in the wake of establishment of NIAE in 1990s the cycle becomes full. Should we close down some institutions to start new? Can't we explore the possibilities of streamlining the functioning of institutions so that both could co-exist? The increasing scope of adult continuing education in a huge country like India definitely justifies the continuation of DAE and NIAE. While the former could be a publication, coordinating and monitoring agency of field programmes, the latter could confine to research studies and professional development programmes. Keeping in view the decentralised approach to planning, SRCs could effectively take over the present functions of DAE related to material preparation and training of functionaries, specially when it is proposed to expand and strengthen them during the Eighth Plan. In fact, there is a need to have a Directorate for providing technical support to NLM.

Emphasising the need for convergence of services at the grassroot level for effective delivery of variety of adult education programmes, the Plan has suggested the need for integration of a variety of programmes offered by JSNs, rural libraries, Krishi Vigyan Kendras and Shramik Vidyapeeths, etc. It has been stated that JSNs should be strengthened by integrating them with the rural libraries wherever they exist. Although integration of four different types of institutional infrastructures of JSN, rural libraries, KVK's and SVP's is desirable, it may necessitate redefining their roles and functions as each one is meant for a specific category of clientele. The scope of Shramik Vidyapeeths would be expanded by covering the workers in unorganised sectors and using distance education modules. The Plan has highlighted the role of open learning in the promotion of post-literacy and continuing education programme. On the issue of women's literacy, the Plan has upheld the methodology of Mahila Samakhya Project of mobilising women's groups to voice their needs.

Resource Mobilisation and Utilisation

Adult education is envisaged as people's programme and its success depends on their active cooperation as well as contributions in terms of materials and funds. This assumes immense significance in the context of resource crunch. The suggestion that 20 percent of resources required for the literacy campaign should be generated from the local community is very modest. Keeping in view the earlier experiences, it may be possible to involve a large number of commercial concerns and industrial houses in sponsoring Kala Jathas and other environmental building activities. Another possibility could be a gradual reduction of 100 percent grant to the JSNs during the second and third years so that the JSNs could be taken over fully by the local community. Thus the over-dependence of people on government for developmental activities like literacy could be gradually brought down.

In spite of resource crunch there has been substantial increase in the outlay for adult education during the Eighth Plan. Compared to the approved outlay for adult education programme during the Seventh Plan, there was an increase in the overall expenditure (both state and central sector). However, the increase was mainly in the central sector. As against the approved outlay of Rs. 1.30 crores in the central sector, the actual expenditure was Rs. 313.04 crores but in the state sector the actual expenditure was Rs. 156.53 crores as against the approved outlay of Rs. 230 crores. (*see* Table No. 4). Though in general there is a shortfall on the part of the state sector; as a whole, shortfall in the backward states like U.P. Rajasthan, Madhya Pradesh is more than 50 percent of the approved outlay. As is evident from Table No. 4, in the two annual plans 1990-91 and 1991-92, the pattern of expenditure towards adult education shows an upward trend. As against 6.15 percent (Rs. 469.5 crores) of the Seventh Plan expenditure on adult education, the allocation for it in the Eighth Plan is 9.43 percent (Rs. 1807.6 crores). Of this, Rs. 1400 is in the central sector and the remaining in the state sector.

Some Issues

Does the present Plan offer any innovative strategies or structures? The adoption of Total Literacy Campaign as a dominant strategy is not a novel idea. Different shades of the campaign have been tried over during the past five decades and in fact certain aspects of the present campaign have been first tried out during the Provincial Mass Literacy Campaigns of British India (1937-38). The Kala Jathas were effectively deployed during the Bihar Literacy Campaign (1937-39) when they were organised through special troupes of artists called Mod Mandalies. The teaching-learning process followed in the video film, "*Chauraha*" is based on Laubach Method developed in 1950s. The widespread participation of all sections of society in the present literacy campaigns and community contributions in terms of lanterns, blackboards, etc. also reminds us of the 1930s when such community support was common. In fact in the Bihar Literacy Campaign of 1937-39, big printing presses and publishers had brought out literacy primers free of cost. The establishment of National Institute of Adult Education may be seen as a reincarnation of the National Fundamental Education Centre which had functioned during 1950s.

Eradication of illiteracy has always been an important programme in most of the five-year plans since 1980s. Yet the target of achieving 100 percent literacy continues to elude us. Why has it been so? One of the reasons may be that our planners have not given due importance to the socio-economic background of illiterates. The majority of them being poor and living below the poverty line and also belonging to SC/ST and weaker sections of the society, the crucial issue revolves around poverty and unless the literacy programme enables them to tide over stark poverty and that too within a short period, it cannot succeed in achieving it's objective. Though it may be possible to attract not so very poor, it would be extremely difficult to motivate those living below the poverty line. Literacy would have meaning to the poor only if it becomes a means to sustain their lives. Since 29.9 percent of the population (about 23.76 crores) live below the poverty line and 1/3rd of them (about 8 crores) may be in 15-35 age group – the clientele of adult education programmes – it would be essential to devise special strategies for this group. The problem becomes more complex and challenging since most of them are confined to predominantly non-literate rural society ridden with casteism, social evils and class tensions. Hence it is all the more necessary to design and implement a variety to innovative income generation programmes, which would be area specific and enable the poor to earn as well as learn simultaneously. Such a practical oriented approach would not require any environmental building activities like Kala Jathas or other motivational programmes.

Despite having a well articulated philosophy of adult education which is basically rooted in Freirian concept of Conscientisation, in practice our adult education programme tends to be too conservative and conveniently side track the basic issues of poverty. Though the adult education programme seeks the cooperation of activists, their role remains restricted.

In spite of these limitations of the Plan, the Eighth Plan does come out with minor improvisations in the form of strengthening of institutional infrastructures of State Resources Centres, National Institute of Adult Education, Jan Shikshan Nilyams, enlarging the voluntary base and encouraging the voluntary organisations, expansion of the programmes of Shramik Vidyapeeths. However, the strategies and structures suggested in the Eighth Plan are of evolutionary in nature. They aim at strenghtening some of the structures developed during the Seventh Plan. If there are no radical suggestions or new ideas in the Eighth Plan, it is not because of the dearth of ideas; but due to the inherent limitations of plan formulation and the need to keep in view the National Policy on Education and Programme of Action, ongoing programmes of the Department of Education and their evaluations, and reports of the different Working Groups constituted in connection with the Eighth Plan. There is, however, a need for development of greater professionalism among the concerned staff in the Planning Commission by giving them greater freedom from the routine items of work so that they could come out with more innovative ideas. In general, there is also a greater need for openness in the process of plan formulation and dissemination. At present the Plan remains as the primary concern of the Planning Commission and the concerned ministries. The target-group-people, is only a silent partner. The first step in making a plan as an effective instrument of social change, is to enhance the cooperation of people in the process of planning itself.

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References

Eighth Five Year Plan (1992-97), New Delhi : Planning Commission, 1992. Vol. I & II.

Annual Report of Ministry of Human Resource Development 1991-92, New Delhi : Department of Education, 1992.

Draft Eighth Five Year Plan (1992-97) and Annual Plan 1992-93. Uttal Pradesh, Vol. I : Lucknow : Government of U.P. 1991.

Draft Eighth Five Year Plan (1992-97), Bihar : Patna : Government of Bihar, 1991.

Draft Eighth Five Year Plan (1992-97), Rajasthan Jaipur, Government of Rajasthan, 1991.

Draft Eighth Five Year Plan (1992-97), Madhya Pradesh : Bhopal : Government of Madya Pradesh, 1991.

NSSO, **42nd Round** : Report No. 365.

NSSO, **43rd Round** : Report No. 372.

Statistical Database for Literacy, New Delhi : National Institute of Adult Education, 1992.

Selected Educational Statistics 1990-91 :, New Delhi : Ministry of Human Resource Development, 1991.

TABLE NO. 1 – Adult Education : Proposed Targets in Eighth Plan & Annual Plan

Figures in Thousands

Sl. No.	States/UTs	Annual Plan 1992 – 93	8th Plan 1992 – 97
1	2	3	4
1.	Andhra Pradesh	4898	7778
2.	Arunachal Pradesh	33	175
3.	Assam	900	4500
4.	Bihar	1800	9400
5.	Goa	20	100
6.	Gujarat	850	4300
7.	Haryana	1142	5711
8.	Himachal Pradesh	160	800
9.	Jammu & Kashmir	958	1493
10.	Karnataka	1600	6000
11.	Kerala	196	980
12.	Madhya Pradesh	2500	8650
13.	Maharashtra	990	4450
14.	Manipur	46	230
15.	Meghalaya	35	248
16.	Mizoram	15	32
17.	Nagaland	23	115
18.	Orissa	2600	13000
19.	Punjab	1000	5000
20.	Rajasthan	1727	9335
21.	Sikkim	8	47
22.	Tamil Nadu	2000	7800
23.	Tripura	93	402
24.	Uttar Pradesh	3340	16700
25.	West Bengal	350	1750
26.	Total States :	27284	109996
27.	A & N Islands	2	10
28.	Chandigarh	5	26
29.	Dadra & Nagar Haveli	6	15
30.	Daman & Diu	1.20	6
31.	Delhi	150	750
32.	Lakshadweep	2.40	12
33.	Pondicherry	6	30
34.	Total UTs.	172.60	849
35.	Total States/UTs.	27456.60	110845*

*The Eighth Plan Document gives a target of 10.58 crores. However, the subsequent data received from the states indicates an increase by 0.50 crores.

Source : Planning Commission. Calculated from the 8th Plan Documents of all the States/UTs (1992 – 97).

TABLE NO. 2 – Proposed Target and Coverage of Adult Education in Selected States

Figs. in lakhs

Sl. No.	Name of the State	Total illiterate population	Estimated illiterate population in the age group 15-35 Yrs. (as 1/3 of total illiterate population)	Proposed Target fro 8th five year plan.	Coverage of illiterate population		Total No. of Distts.	Proposed Distts. to be covered under TLC
					1991-92	1992-93 Proposed		
1	2	3	4	5	6	7	8	9
1.	Uttar Pradesh	655.46	218.48	167.00 (76.4%)	23.61	33.40	63	20
2.	Bihar	428.21	142.73	94.00 (65.8%)	10.00	18.00	42	N.A.
3.	Rajasthan	214.71	71.57	93.35	7.90	17.27	27	10
4.	Madhya Pradesh	305.78	101.92	86.50 (84.9%)	12.30	25.00	45	14

Source : (1) Statistical Data base for Literacy (1981 – 91)
New Delhi : National Institute of Adult Education, 1992.

(2) Draft Eighth Five Year Plan Documents of U.P., Rajasthan, Madhya Pradesh, Bihar.

TABLE NO. 3 – STATUS OF LITERACY, GER, DROP-OUT, PEOPLE LIVING BELOW POVERTY LINE IN SELECTED STATES

SL. NO.	STATES	LITERACY RATE 1991 CENSUS			GROSS ENROLMENT RATIO PRIMARY LEVEL			DROP-OUT RATES 1987-88-I–V Class PRIMARY LEVEL			% NEVER ENROLLED CHILDREN 6-11 YEARS AGE GROUP						PEOPLE LIVING BELOW POVERTY LINE	
											RURAL AREAS			URBAN AREAS				
		MALE	FEMALE	TOTAL	BOYS	GIRLS	TOTAL	BOYS	GIRLS	TOTAL	BOYS	GIRLS	TOTAL	BOYS	GIRLS	TOTAL	NUMBER OF PERSONS (LAKHS)	% OF PERSONS
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1.	Bihar	52.63	23.10	38.54	107.55	55.05	81.70	63.38	68.93	65.63	57.07	77.02	66.06	37.02	52.02	43.02	336.54	40.08
2.	Madhya Pradesh	57.43	28.39	43.45	122.03	84.34	103.65	36.64	48.04	41.04	44.00	69.01	55.06	11.00	24.02	17.02	224.97	36.07
3.	Rajasthan	55.07	20.84	38.81	105.00	48.79	77.96	53.12	60.75	52.25	39.04	75.03	55.09	23.01	35.06	28.07	99.54	24.04
4.	Uttar Pradesh	55.35	26.02	41.71	98.59	62.27	81.38	47.84	47.24	47.65	41.00	70.08	54.06	30.01	41.00	35.01	448.34	35.01
	All India	63.66	39.42	52.11	115.29	85.97	101.03	43.35	49.42	46.97	35.04	54.08	44.05	15.08	22.08	19.03	2376.07	29.09

Source :

(1) **Literacy Digest** : New Delhi, Directorate of Adult Education – 1990-91.

(2) **Educational Statistics 1990-91** : Ministry of H.R.D. (Dept of Education).

(3) **Annual Report 1991-92 Part I** : Ministry of H.R.D. (Dept. of Education).

(4) N.S.S.O. 42nd Round (July 1986-June 1987) Report No. 365 Part II, Volumes I & II.

(5) N.S.S.O. Gross Report 43rd Round Report No. 372.

Table No. 4 – FINANCIAL PROGRESS FOR ADULT EDUCATION

Rs. in crores

Sl. No.	Name of the State	7th Five Year Plan 1980-85			Annual Plan 1990-91			Annual Plan 1991-92			8th Plan 1992-97			Annual Plan 1992-93
		App. Outlay	Expdr.	%age utilisation	App. Outlay	Expdr.	%age utilisation	App. Outlay	Expdr.	%age utilisation	Proposed Outlay	Recommended outlay	App. Outlay	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1.	Uttar Pradesh	42.04	16.07	38	4.75	3.03	64	3.40	5.31	156	30.71	30.73	24.26	5.50
2.	Bihar	29.96	37.31	124	12.50	11.72	94	12.00	12.50	104	107.00	82.00	60.34	10.17
3.	Rajasthan	13.14	5.01	38	0.88	0.89	101	1.15	1.40	122	12.00	35.00	30.00	1.60
4.	Madhya Pradesh	19.71	9.44	48	5.00	1.87	37	5.50	5.00	91	26.54	41.28	19.84	7.80
	All India State Sector	230.00	156.53	68	55.12	43.51	78.9	55.75	71.44	128	497.64	510.85	407.64	80.66

Source : Planning Commission. 8th Five Year Plan Documents of the States.

Adult Education

11.5.15 Literacy programmes will be launched in districts/regions which are educationally backward or have high concentration of SC/ST population or have low female literacy. By the close of the Eighth Plan, 345 districts including about two-thirds of all districts in the educationally backward States would be covered by the TL campaigns, while the centre-based approach would be gradually phased out and confined to hilly, tribal and sparsely populated regions. The strategy for backward districts would be two-fold. First, a few blocks would be selected where the literacy campaign can achieve success within a reasonable period. The demonstration effect of the blocks would influence the backward blocks which, in course of time, could develop appropriate literacy programmes. Secondly, the voluntary base in educationally backward districts being somewhat weak, ways and means of identification, strengthening and expansion of the same would be evolved in consultation with the respective State Governments. It is also necessary to develop technical competence among voluntary agencies so that the partnership between the Government and operating agencies becomes meaningful.

11.5.16 The possibility of further enhancing contributions from the community especially in urban areas and industrial towns would be explored so that apart from voluntary service, atleast 20 percent of the total expenditure on the campaign may be met.

11.5.17 In States, where library movement is strong, rural libraries should be integrated with the JSNs which are envisaged as innovative post-literacy and continuing education centres. Reputed NGOs, educational institutions, distinguished individuals, ex-servicemen, war widows, award winning teachers, etc. will be encouraged to set up and run JSNs. Particular attention would be paid to the availability of a variety of quality materials in adequate quantity to the neo-literates. Reputed printing presses and publishers would be motivated to print gratis literacy materials, posters and charts.

11.5.18 The academic and technical support to Adult Education programmes would be provided by the newly set up NIAE, which would be involved to a greater extent in various aspects of training, action research and monitoring, so that the Directorate of Adult Education can be phased out by the end of the Eighth Plan. At the State level, the State Resource Centres will be strengthened.

11.5.19 The scheme of SVs which provide a variety of training programmes to the industrial workers and their families would be extended to cover workers in unorganised sector and would also experiment with a variety of training models including distance education.

11.5.20 The contents of adult education would also include inculcation of values like secularism, national integration, scientific temperament, small family norm, concern for environmental conservation, cultural appreciation and so on. Even a society with a literate population is required to provide many avenues for continuing education in the context of the march towards a learning society, in which open schools and open universities would play an important role.

Excerpts from : *Eighth Five Year Plan (1992-97) – pp. 290-91.*

UNIVERSITY NEWS

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Science, Technology & Moral Values

"There appears to be an inverse relationship between growth in science and technology for better physical comforts and moral values. How else could one explain the phenomenal increase in terrorism, killing of innocent women and children, enticing children for drug abuse and least concern for the fellow human being, in all parts of the world?", said Dr. B. B. Sundaresan, Member, State Planning Board, Tamil Nadu. Dr. Sundaresan was delivering the Convocation Address at the ninth convocation of the Bharathidasan University, Tiruchirapalli. He added, "leaders of stature, responsible parents, industrious workers, studious scholars, devoted academicians and disciplined citizens, appear to have become endangered species in environmental parlance. Human greed has not only over exploited nature, extinguishing several flora and fauna, but has also limited the growth of men of stature." Excerpts

The twentieth century has witnessed breathtaking developments in every sphere of human endeavour through the application of science and technology. Graduates of the first five decades of twentieth century found themselves in social turmoil for removal of a foreign power to gain political freedom. The rate of developments in science and technology was gradual during that period, which allowed time for the human spirit to absorb and adopt. Accordingly, leaders in society, whether political, administrative, academic or other fields, were able to uphold societal values through large-hearted moral perceptions. Leaders of stature, whose integrity, sincerity and humaneness were worthy of emulation, walked through the length and breadth of this great country. The second half of the twentieth century has been witnessing breathtaking and even explosive growth of knowledge, along with political freedom. Science and technology applications appear to have overcome human values. All these endeavours have provided the tools and techniques to make the physical environment congenial for better quality of life.

Unfortunately, such growth has also been witnessing the shrinkage of the mind with respect to moral and societal values. There appears to be an inverse relationship between growth in science and technology for better physical comforts and moral values. How else could one explain the phenomenal increase in terrorism, killing of innocent women and children, enticing children for drug abuse and least concern for the fellow human being, in all parts of the world? Leaders of stature, responsible parents, industrious workers, studious scholars, devoted academicians and disciplined citizens, appear to have become endangered species in environmental parlance. Human greed has not only over exploited nature, extinguishing several flora and fauna, but has also limited the growth of men of stature.

Rabindranath Tagore wrote his *Gitanjali* at the turn of this century, which we read with emotion as students in the schools prior to Independence. How relevant it is to be quoted today almost a hundred years later :

"Where the mind is without fear and the head held high;

Where knowledge is free;

Where the world has not been broken up into fragments by narrow domestic walls;

Where words come from the depth of truth;

Where tireless striving stretches its arms towards perfection;

Where the clear stream of reason has not lost its way into the dreary desert sand of dead habit;

Where the mind is led forward by Thee into ever-widening thought and action;

Into that heaven of freedom, my Father, let my Country awake."

Just as scientists were able to split the atom, which has also led to disaster, socio-political leaders have been able to split the human mind and make it so small that it is unable to show common courtesies to fellow citizens. A new civilisation appears to be emerging, where the value of family, ways of working, loving and living have different concepts and defies the comprehension of the present generation. Brzezinski calls it 'technotronic age'. Daniel Bell calls it 'post industrial age'. A few hundred years of industrial era, overtook a few thousand years of agricultural era. But the new era may last few decades telling upon the quality of human mind.

Graduates of today may witness obsolescence in knowledge, skills, and experience before they reach mid-professional career. In the fifties, university students used mathematical tables and slide rule for computations. In about two decades, calculators replaced them. Those graduates also witnessed computers overtaking all the earlier gadgets, when they reached the top of the professional ladder. Only such of those who had an open mind, willing to learn and adapt themselves to new realities were able to lead. Others fell by the wayside or became misfits. One hears of scientists, engineers, doctors, veterinarians and other professionals who found themselves ill it at ease at the peak of their professional career. Graduates of today should be aware, that such a phenomena, will overtake them as well, but at a faster rate.

Listening to radio runing commentaries on sports, games and athletics was common in the forties. Films of such events could be visually seen only after several months. Todays, one is able to witness such events as they take place around the globe. Researchers had to depend on libraries to procure reference material which took several months. Today, library network provides the capability to procure reference material through Electronic Mail by the press of a button. Along with this development, one also hears about societies, where men and women cohabit and produce children without the institution of marriage. Human bond built in the family through affection, love and sharing of joys and sorrows, appears to be vanishing. In short, successful human being, appears to be one, who can command all the modern gadgets for professional work , lives all by himself for physical well being, eats and plays well and also delivers made to order babies. Graduates of today may find the choice difficult as to the path they would tread.

University education is only a stepping stone which enables you to take the first step in a journey of a thousand miles. Several of the skills learnt may have to be discarded. They may have to fall back on specialized education for updating skills and expertise much more frequently than the earlier generation.

Higher Education at Cross Roads

It is in this context a look at higher education and its mandate for societal needs becomes relevant. University system, devoid of library, laboratory, academicians not devoted to teaching, research and research guidance, students unwilling to quench the thirst of knowledge, and administration bereft of quick response, will become a burden to the society. How long could society, and its tax payers undertake the burden of supporting a system, which does not prepare the graduates to be useful and purposeful citizens?

Historical review of the system of higher education would also be relevant on this occasion. Pre-British period institutions were predominantly religious in character such as Padasalas and Madrassahs. They were supported by Kings and Royal houses through generous gifts, but institutionalization of educational system did not exist.

The first attempt at modernization witnessed the establishment of Calcutta Madrassah (1781) founded by Warren Hastings to prepare the sons of Nawab families for responsible and lucrative position in the East India Company. Subjects taught included arabic, religion, arithmetic, astronomy, geometry, history, philosophy, law and rhetoric with persian or arabic as medium of instruction.

The Woods Despatch (1854), considered to be the 'Magna Carta' of education in modern India, laid the foundation for higher education system in India. However, the period 1775-1853, during the East India Company administration witnessed formal development of higher education, though set to gain firm roots in trade and commerce.

The objective of British policy on higher education was clear and well set. The policies and programmes outlined had specific goals to achieve through educational administration. It aimed at diffusion of arts, science and philosophy of Europe to trustworthy men capable of providing support to the British Crown. Little did the British masters expect, that such a modern system, could be mastered by Indians, with their intellectual acumen, societal bearing and wisdom, could overcome their administrative machinery and even to force them out. A society, which had witnessed the synthesis of different religious thoughts, produced hundreds of men of wisdom and intellect, over a period of several thousand years, could not be dominated intellectually, though it was possible to dominate politically. Science and technology provided the required support to the British to establish economic and political superiority and dominance.

It should be viewed in the context of such overlapping dominance of science, technology, political wisdom, and administration over society. However, societal values, culture, tradition and religious practices do play a vital role in the modern concept of development. It is here that our educational system and administration appear to have mixed up the issues, set misconceived priorities and programmes, leading to a state of chaos.

Howell stated that "Education was first ignored, then violently and successfully opposed, then conducted in a system now universally admitted to be erroneous". It has not been possible to define our educational policy clearly, set the goals properly and accord priorities suitable, thus proving Winston Churchill to be correct that we are unfit to rule ourselves. National Education Policy (1968), aimed at promoting national progress, sense of common citizenship and culture and to strengthen national integration. One is constrained to state that radical restructuring to achieve set goals has not even been thought of, leave alone implementation.

Challenges of pre-independent and post-independent era may vary but human aspirations for better quality of life continue to remain unfulfilled. Even a model Indian educational system and pattern has not emerged so that one could look to the future with confidence. Academicians and experts should share the blame equally along with leaders of other areas of human endeavour.

Higher education and scientific research have been on the decline over a period of time which need immediate attention and corrective action at different levels. Large number of talented boys and girls, the bulk of whom are from middle and lower income groups, have the intellectual capacity and capability for higher education and thirst for knowledge and growth. In spite of heavy investments made by the Government in higher education after Independence, the returns in the shape of performance excellence are far from satisfactory. Universities and institutions of higher learning have not been able to promote excellence in scientific research. It is very rarely one hears about professors and scientific workers from universities in Tamil Nadu who have been recognized for excellence in scientific research which clearly illustrate the pedestrian level of scientific research undertaken by universities in Tamil Nadu.

Performance of candidates in all India services alone need not be the only criteria to asess the calibre of candidates. Academic programmes and input into central institutes like IITs, agricultural universities and institutes of medicine reveal a remarkable improvement in the performance on the part of the candidates. Most of them who get an opportunity to enter IIT have shown remarkable improvement in their getting greater opportunities in universities abroad as well as public and private sector scientific and technological organisations and industrial undertakings. The input cost per candidate varies from a meagre Rs. 5050/- for college education to as high Rs. 100,000 in higher technological institutions.

Obviously IITs and colleges of medicine get the major share of input cost per student. It could thus be deduced that better performance can be expected if necessary infrastructure and congenial atmosphere could be provided for the candidates. The youth of Tamil Nadu are in no way inferior in cognitive abilities (intelligence, memory, creativity).

Bulk of the input cost in higher education have gone into the administrative and salary components rather than important infrastucture like library, laboratory and other support facilities. After decades of representation only now academic faculty have been recognized for better emoluments and it should be continued and further improved upon. Hence reallocation from salary component of the faculty to other facilities in higher education does not arise. On the other hand greater inputs should be provided for library and laboratory facilities which will expose the candidates to greater and modern levels of scientific pursuit. Even the meagre allocations have gone towards building up infrastructure in metropolitan centres rather than smaller urban centres and municipal towns. Several colleges have been offering postgraduate programmes in science without even the minimum facilities for library and laboratory. One should not expect high quality performance in scientific research from talented candidates with poor library and laboratory facilities.

During earlier decades prior to independence, the number of institutions and candidates entering the university level education were of the order of a few thousands which have grown 100 fold 50 years later. It was possible for private philanthropic institutes to support a small number of educational institutions. So, the well known names among university colleges of earlier years were mostly supported by individual philanthropists, missionaries, charities and government. It is no longer possible to count support from this route fully.

One should now turn to look around for other possible avenues to support infrastructure build up in higher education besides government and private philanthropists.

Two possible sources emerge which have not been fully exploited so far. One source is the public and private sector industrial undertakings. Industries whether private or public sector in India, have drawn upon the professional manpower provided by the university system at almost no cost to themselves. No doubt industries provide for economic development. Other input costs such as technology, machinery and professional manpower as well as training have to be necessarily borne by the industries. Industries have been meeting the cost of all items except human resources development, particularly higher education in science & technology, though a large number of candidates from IITs, well-established engineering institutions as well as science faculties of universities have been recruited by the industry. They have been getting them without any input cost. In view of the major constraints in funding from other sources, the time is ripe to insist upon public and private sector industries to support institutes of higher learning in science & technology.

Bulk of the expenditure on IITs and government supported engineering colleges should come from the industrial undertakings, rather than the government. This will need a major shift in emphasis in the organisational as well as funding structure of industries. Tax incentives as well as other societal encouragement and appreciation could be provided to industrial houses supporting such institutions. As an alternative, at least the cost of producing a scientist at Master's degree level and above or a technologist at Bachelor's degree and above should be borne by the industrial houses which should not be difficult to identify.

The other source which has not been fully tapped is the goodwill among the alumni of colleges, universities and technological institutions who are occupying important position and supporting industrial undertakings and institutes in India and abroad. They have been doing remarkably well but their earlier education was supported by this society and institutions. Several thousands of such scientists and technologists spread all over the world would not grudge parting with a small fraction of their current earnings to support institutions of their choice. The unfortunate part is no meaningful infra-structure exists among colleges, universities and institutions of higher learning which has an organised alumni association which could tap this source for funding. An institutional framework to mobilize and channelise such funds need be created immediately. NRI funds now supporting industries and hospitals, could be channelise for higher education as well.

A small beginning has been made by the alumni of the College of Engineering, Guindy, Anna University wherein each batch of past students have been contributing to create endowments to support specific activities. This is a clue which can be taken up for spreading further. Several thousand graduates would have come out of each institution as well as universities who will be willing to support their own Alma Mater if a good institutional framework exists and are assured that the amount provided by them will get utilised to build up excellence in scientific pursuits. In fact, one would feel proud to be associated with such endeavours. It is time that such an effort is organised at institutional level and the government provide necessary encouragement and appreciation by way of tax incentives for such contributions made by alumni to promote scientific and technological research.

In addition to building up infrastructure there is a major need to restructure the academic programmes as well as the administrative system of affiliated colleges, autonomous colleges and university departments as well as the plethora of examination systems. It is time a critical review of the linkage between university, university departments as well as affiliated colleges is made so that the administrative overburden and financial constraints could be eliminated. Some of the issues relevant to poor performance could be identified as :

a) Affiliation of colleges to universities which have lost their dynamism due to academic bodies and outmoded management system (academic council, senate and syndicate) which are unworldly and deal mostly with non-academic matters rather than matters relating to promotion of excellence in teaching and research.

b) Scientific research is pedestrian, and not fully relevant and linked with the development of the nation.

c) University departments are unable to attract research funding from national and international agencies to promote excellence.

d) Duplication of efforts on stereotype academic programmes and research in different universities, with no coordinated efforts.

Let us not forget that the main actors in successful 'Green Revolution' are farmers of Punjab, Haryana and other regions who may not have entered the portals of university. 'White Revolution' leading to increased milk yield was achieved by men who may not be graduates of university. Handloom weavers and pattern designers of Tamil Nadu have contributed much more in foreign exchange than graduates. Leather tanners of Tamil Nadu and Uttar Pradesh have captured a good part of European market through their skills. Goldsmiths who may not have seen a university campus, have earned more foreign exchange than graduates. Humble hosiery workers of Tiruppur are shining examples of putting India in the top bracket in World market.

Such humble farmers, handloom weavers, tanners, goldsmiths and hosiery workers, to name a few, have contributed more to the economy of this great country, than the graduates produced by the university system. In fact their contribution far outstrips that of engineers and technologists who migrated for greener pastures elsewhere. It is to them and their families that we as graduates of the university owe a debt of gratitude for supporting higher education.

Let us attempt to restructure the higher education with well-defined goals. University system should eliminate all outmoded management system, outlived academic bodies, but provide for excellence in scientific and academic pursuits, respond quickly to societal needs and aspirations.

Some of the relevant issues that need urgent consideration by parliamentarians, legislators, academicians, scientists and administrators are :

i) Diversification and vocationalisation of higher secondary education;

ii) Decentralization and support of institutions of higher learning and scientific research;

iii) Freeze further location of institutes of higher learning in metropolitan areas;

iv) Identify industries and alumni associations to support higher education by creating institutional framework;

v) Restructure the university administration eliminating all outmoded bodies and systems and modernizing the administrative set up;

vi) Delineate clearly the functions of university departments, deemed university, autonomous colleges and distance education with clear mandate to each of them instead of overlapping functions;

vii) Review of the plethora of examination and evaluation systems to bring about commonality in testing the performance of the candidates;

viii) Creation of expert bodies of academicians, scientists and technologists and eliminating all ad hoc systems which have stifled higher education and scientific research; and

ix) Science & Technology Forum of Parliamentarians at the central level and Legislators at the state level to provide the urgently needed linkage between the political system and the academicians.

Ultimately all the developmental efforts aim at providing better quality of life for citizens. Clean water, pure air, good housing, health care and educational infrastructure and an aesthetic environment leading to flourishing of art and literature, form a framework for good quality of life. Let us hope that the chaotic conditions would be passing phase in development. Religious thoughts, strong moral traditions, family bond, intellectual acumen and collective wisdom of Indian society is capable of overcoming such onslaughts as it has been able to do earlier. May God give us the strength and wisdom to tread the path of glory and 'into that heaven of freedom let our country awake'.

CAMPUS NEWS

Distance Education at Kakatiya Varsity

'The distance mode of education has become an inescapable necessity because of the inability of the conventional mode to cater to the ever-growing needs of the youth in the realm of higher education in our country,' said Dr. K. Jayashankar, Vice-Chancellor of the Kakatiya University. He was speaking as the chief guest at the Training-cum-orientation Programme for Principals and Co-ordinators of Study Centres organised by the School of Distance Learning & Continuing Education (SDLCE) at Kakatiya University recently.

Dr. Jayashankar said that the open learning system had made great strides within a short span of 10 years and has come to stay as an effective and viable alternative channel for accelerating the spread of higher education in the country.

Referring to the scheme of distance learning initiated at the Kakatiya University in the year 1988, Dr. Jayashankar said that this exercise was still on an experimental stage and its working would be reviewed from time to time for improving its efficacy. Any defects or limitations encountered during the initial phase should not deter the organisers of the School of Distance Learning from reformulating the strategies to make the system more effective and meaningful, the Vice-Chancellor maintained.

Prof. A. Shankaraiah, Registrar of the University, who presided, said that the training programmes would give an opportunity to the participants to interact with the resource persons and have better insights into the working of the system.

Dr. K. Murali Manohar, Director of the SDLCE in his report said that the training-cum-orientation programme was organised by the School of Distance Education to make the important functionaries in the field – Principals of the Colleges and Co-ordinators of the Study Centres – understand better the concepts and philosophy of distance education and equip themselves with finer strategies of teaching.

16 Principals and 28 Co-ordinators of the Study Centres representing 34 colleges spread over the five districts of Karimnangar, Khammam, Adilabad, Nalgonda and Warangal participated in the programme.

Compendex Plus Database at TIET

The Central Library of the Thapar Institute of Engineering & Technology, Patiala, has obtained a very powerful search tool, the Compendex Plus Database which is an information bonanza to all the members of faculty, scientists and students. From the current year the Library will receive updates every quarter.

Engineering Index is the most comprehensive index of current periodical literature in all the branches of engineering and allied sciences which no researcher can miss. The printed version of Engineering Index is now available in CD-ROM format also and this computer searchable version is named : *Compendex Plus.*

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The Library has also procured Hitachi CD-ROM Drive 1700S stand alone model which is attached to the Computer and user can easily get the desired information on screen and take a print.

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The Database can be searched in the Computer workstation of the Library by the working engineers, faculty and P.G. students of the engineering institutions in Punjab, Haryana & Himachal Pradesh.

Computers in Administration

A ten-day workshop on 'Use of Computers in Administration and Financial Management in Universities' was recently organised by the Association of Indian Universities, at University of Poona, Pune.

Shri P.K. Malhan, Asstt Director (Research), AIU, who conducted the workshop, in his opening remarks, explained AIU's concern over the increasing crisis in respect of Administration & Management which was the underlying cause of holding series of such programmes. Prof Arun Nigavekar, Director, EMRC, University of Poona, Pune, who acted as Chief Co-ordinator for this workshop outlined the basic philosophy of the workshop.

Inaugurating the workshop Prof. Shridhar Gupte, Vice-Chancellor, University of Poona, stressed that the use of computers was inevitable for increasing efficiency in day-to-day administrative work. He remarked that the stupendous changes in higher education leading to expansion of the activities in universities had necessitated the application of modern technology.

The main objectives of the workshop were :

(i) To sensitise the participants to the need for effective use of computers in administration & financial management in universities and the potentialities/limitations of computers;

(ii) To acquaint the participants with available software packages including modifications to suit individual requirements of the universities;

(iii) Providing 'hands on' experience on computers for the purposes of building confidence in the operation & usage of computers;

(iv) To share information regarding the extent to which computerisation has been applied in the individual universities;

(v) To share the experiences, problems and their solutions with a view to standardise the software.

Consistent with these objectives, the workshop covered the ollowing areas: (i) introduction to computer fundamentals, (ii) Introduction to computer applications, (iii) Trends in information technology, (iv)Introduction to using a computer, (v) Introduction to MS DOS, WORD STAR, LOTUS & D BASE packages accompanied by demonstrations & practice sessions, (vi) University automation – scope of computerisation, basic requirements for computerisation, possible areas for computer application, (vii) Related subjects like – trends in information technology, management information systems, selection of computer systems, college database, local/wide area network (LAN) etc., (viii) Display & demonstration of office automation products by firms, which included FAX machines, photocopiers (coloured), paper shredders, uninterrupted power supply (UPS) system, LAN, etc.

30 participants including Senior Administrators like Registrars, Finance Officers/Comptrollers, Deputy Registrars, Assistant Registrars & Officials from the department of Computer Science from different universities attended the programme.

Seminar on Distance Education

'Distance education is extremely cost-effective compared to conventional education, and the University Grants Commission is prepared to provide more finance for the expansion of Distance Education in the country, the UGC Chairman, Prof. G.Ram Reddy, said in New Delhi recently. He was inaugurating a three-day seminar on distance education for Vice-Chancellors of Open Universities and Directors of Correspondence Courses Institutes. Prof. Reddy said the cost per student in conventional system was to the tune of Rs. 3,520 whereas it was as low as Rs. 522 in distance education. Even World Bank has considered distance education as one of the low cost alternatives in the field of higher education, he added.

Prof. Reddy cautioned that at present there was an imbalance in the system of distance education institutes. Out of 41 institutes, 16 were in the north, 15 in south, seven each in central and western parts of the country and three in the east. "This needs to be rectified", he said.

He said the seminar must concentrate on certain critical areas – quality of course material improvement, sharing of course materials by institutions, networking of institutions and transfer of credits for a particular programme pursued by a student.

The Vice-Chancellor of the Indira Gandhi National Open University, Prof. V. C. Kulandaiswamy, said that every State would soon have an Open University as per the recommendation of the Central Advisory Board of Education.

2 Engineering Colleges for Punjab

The Punjab Government is reported to have decided to set up two engineering colleges at Gurdaspur and Ferozepore. The Chief Minister, Mr. Beant Singh, who presided over a high-level meeting, emphasised that the colleges must introduce new courses which would help improve the economy of the state. He suggested that minimum possible land should be utilised. The colleges were expected to be set up at a cost of Rs 44 crore.

According to the Minister of State for Technical Education, Mr Lakhmir Singh Randhawa the government proposed to start "lateral entry system" from the next academic session for the benefit of those who have a diploma and wished to go in for a degree course.

Regulating Fees in Professional Colleges

The Tamil Nadu Government has constituted a committee, headed by the Vice-Chancellor of Anna University, Dr Ananthakrishnan, to go into the question of regulation of fixation of fees in respect of engineering and medical colleges for framing rules under the Tamil Nadu Educational Institutions (Prohibition of Collection of Capitation Fee) Act, 1992. The Act prohibits collection of fee by institution in excess of what has been prescribed.

The committee will also examine the regulation of fees in respect of self-financing colleges of arts and science as well as unadided courses of private aided colleges.

The other members of the committee are the Director of Medical Education, Director of Technical Education, Commissioner of College Education, Joint Secretary, Law and Additional Secretary, Education.

Training in Records Management

The Centre for Work Study in Educational Administration, Panjab University, proposes to organise the 7th Training Programme on Records Management and Filing System from 25.02.1993 to 02.03.1993 for officers and officials from various universities and educational institutions including School Education Boards. The course contents will include – What is Records Management? Corporate Memory; Records Management and Management Information System; Records Retention and Retrieval; Records Location; Centralisation Vs Decentralisation of Records; Storage and Preservation of Records; Layout of Records Room and Security of Records, etc.

Further details may be obtained from Prof. Shital Parkash, Hony. Director, Centre for Work Study in Educational Administration, Panjab University, Chandigarh.

International Man of the Year

The International Biographical Centre of Cambridge, England, has confirmed the nomination of Dr. R. K. Singh of the Dept. of Humanities, Indian School of Mines, Dhanbad as International Man of the Year, 1992/93. This prestigious award – issued by way of proclamation – is made available to only a few illustrious individuals whose achievements and leadership stand out in the International Community.

The International Biographical Centre is world renowned one of the leading biographical reference book publishers with more than 20 Who's Who titles in 132 separate editions. Among these titles, some of which have been established for more than 50 years, are International Who's Who in Music, International Authors and Writers Who's Who, Dictionary of International Biography, Men of Achievement, The World Who's Who of Women and International Leaders in Achievement.

English Language Studies Deptt at MKU

The Madurai Kamaraj University has established a separate Department for study and research in the various aspects of the English Language. The Department offers M.A. & M.Phil courses in 'English Language Studies' which are interdisciplinary, amalgamating areas like ELT, mass-communication and journalism, translation, women's studies, advanced rhetoric, phonetics, general linguistics, etc. along with Survey courses in literature from Chaucer to Modern age.

The courses are application and skill oriented demanding compulsory practice sessions and projects. For example, the courses in Phonetics, Rhetoric, and Grammer have Phonetic Record Book, A Mini-Anthology of Discourse Types, and Grammar Through Pictures respectively for their projects.

The Department has also plans to offer Certificate and Diploma courses through the evening college of the University.

G.D.Birla Award

The second G.D. Birla Award for Scientific Research for the year 1992 has been given to Prof. Goverdhan Mehta, Professor, School of Chemistry, University of Hyderabad, Hyderabad. The award was instituted last year by the K.K. Birla Foundation with the objective of according recognition to high calibre scientific research undertaken by Indian scientists below the age of 50 years living and working in India.

The first G.D. Birla Award for Scientific Research for 1991 was awarded to Prof. Asis Datta, Professor of Molecular Biology and Bio-Chemistry, Jawaharlal Nehru University.

The award carries a cash amount of Rs. one lakh.

News from Agricultural Universities

Youth Rally at PAU

Shri Harnam Dass Johar, Education Minister, Punjab recently addressed the two-day Yuv Dal Rally organized by the Punjab Agricultural University in collaboration with the State Education Department. He said that along with the academic career, dignity of labour was very important for the all round development of the personality and for making good citizens of the country. He appreciated the youth programme currently going on in the state and said that this programme would be given the same weightage as the NSS. The Education Minister also appreciated the spectacular work done by the PAU which is the pioneer University in developing work culture among the rural youth by starting yuv dal programmes and also starting various agriculture training programmes for them.

Dr. Khem Singh Gill, Vice-Chancellor of PAU, who presided, said that university would extend all the technical help to the education department in expanding this programme to all the schools of the state. He said that University had set up six Krishi Vigyan Kendras in the state for giving the location-specific training to the farmers, farm women and farm youth. Dr. Gill said that 5000 students of 82 schools of four districts have been covered under the Yuv Dal Programme by the PAU and in this rally 1100 students of 51 schools took part. He said that under this programme 20,000 trees were planted by 21 schools during the Van Maha Utsav this year.

Dr. G.S. Gill, Director of Extension Education said that this programme was helping the students in not only building up their personality and adding to the income of their parents but also helping the university in disseminating agriculture knowledge. While giving the detailed account of the various training programmes run by the University for the benefit of the farmers, he urged the youth to utilize their leisure time constructively by taking up various subsidiary occupation.

Dr. Baljit Singh Hansra, Head of the Extension Department said that under this programme the students were helping their parents by taking up individual project, group project and community project by taking up the work of poultry, horticulture, kitchen gardening, mushroom growing, bee-keeping, social forestry, seed production, etc.

News from UGC

Countrywide Classroom Programme

Between 1st January to 7th January, 1993 the following schedule of telecast on higher education through INSAT-1D under the auspices of the University Grants Commission will be observed. The programme is presented in two sets of one hour duration each every day from 1.00 p.m. to 2.00 p.m. and 4.00 p.m. to 5.00 p.m. The programme is available on the TV Network throughout the country.

Ist Transmission

1.00 p.m. to 2.00 p.m.

1.1.93

"Conjecture and Proof in Mathematics – II"

"Evaluation – III"

2.1.93

"GRIPS : Theatre with apurpose "

"Form an idea – I"

"The Week Ahead"

3.1.93

No Telecast

4.1.93

"Scientific Toys"

"Entrepreneurs and Rural Marketing"

"Yours Sincerely"

5.1.93

"The Elements of Group IV and their Compounds"

"Nature of Teaching"

6.1.93

"Structure of Steel"

"Man and Environment"

"Immunogenetics"

7.1.93

"Introduction to Computers"

"Understanding Shelly – III Ode to a Skylark"

IInd Transmission

4.00 p.m. to 5.00 p.m.

1.1.93

"Drunken Driving"

"Wood for the Tree"

"Child Psychiatry – II Identify the Problem Child"

2.1.93

"Nrityaganga – VI : Analysis of Abhinaya"

"Pearls and Bangles of Hyderabad"

"The Week Ahead"

3.1.93

No Telecast

4.1.93

"Scientific Toys"

"Entrepreneurs and Rural Marketing"

"Yours Sincerely"

5.1.93

"The Hydrogen Spectrum"

"Amniocentesis : Medical Uses"

"Using Audio Visuals"

6.1.93

"Getting Ready for Magnification-II"

"Cologne – A city Portrait"

7.1.93

"Buried Treasure : Platinum, the element"

"19th Century Russian Literature: Lev Tolstoy"

Computer Training Programmes

The University Grants Commission is reported to have invited proposals from selected university departments and computer centres to make arrangements for organizing computer training programmes for college teachers. Under this programme it is proposed to impart computer training to 2 to 4 teachers of every college which has been provided computer facilities by the UGC. So far 1,200 colleges in the country have been provided with the facility.

News from Abroad

Interest Free Loans for Students

More than 300,000 Australian university students will be able to take out interest free loans through the government-owned Commonwealth Bank under an agreement announced recently.

Students will be able to borrow up to Aus $4,000 (£1,835) a year to support themselves during their studies. The Commonwealth Bank could eventually attract up to Aus$1 billion in loans each year through the scheme.

The federal government will pay the interest on the loans, leaving it with a bill of more than Aus$100 million over the next three years.

Bust most students are likely to swap part of their free government allowance for a loan, so the government will save millions on the money that will be provided by the bank and which will have to be repaid.

Australia spends almost Aus $900 million a year on the allowance scheme Austudy and the amount has been increasing steadily each year. About 235,000 university students or half the student population receive the non-repayable grants.

Peter Baldwin, the minister for higher education, said the loans supplement was the most equitable way of giving students access to more money. He did not point out that it would also save the government the extra money needed to cope with expanding rolls.

As the scheme was voluntary, students had the choice of retaining their full allowances, he said. If they wanted to take out a loan they could "trade-in" part of the allowance for double the amount as a supplement.

Students on a maximum Austudy allowance of around Aus$6,000 a year could trade in Aus$2,000 in return for a Aus$4,000 loan from the bank. The loan will not have to be repaid for five years and only then if the graduate's annual income exceeds average earnings.

As with the government's higher education charge scheme of HECS, whereby students must repay part of the cost of their tuition through a levy on their income after graduation, the Tax office will apply another special surcharge on the income of those who take out loans.

But to encourage upfront payments, the government is also offering a 15 percent discount to students who pay back the loan within five years.

Information to Farmers Around the World

Originally based at the University of Guelph, the Developing Countries Farm Radio Network (DCFRN) offers an exchange of practical information on low-cost farming techniques between farmers in developing countries. Information is distributed as radio scripts and adapted by participants for local use in radio spots, leaflets, or community education.

DCFRN's Candadian-based staff send out professionally written scripts to over 700 participants who together reach an audience of over 100 million listeners. The only payment for the use of the scripts is to send in ideas to the network. "The premise is that there are really good ideas floating around which might be very popular in one country and people in another country may have never heard of them," says Elizabeth Wilson, Director of DCFRN. A recent script passed on information to farmers about boiling the seeds and leaves of the neem tree to make an extract that has proven to be a very effective pesticide.

European Distance Education Network

The second annual European Distance Education Network (EDEN) Conference will be held on 10-12 May, 1993 at Berlin, Germany. The conference will be devoted to the combined themes of Quality and Technology. Open and Distance learning is presently mediated through a wide variety of media and methods of support. The relationship between the quality of student experience and the systems used to deliver and support it will be explored in plenary and workshops. Workshop sessions will explore the uses and impact of media such as Television/Video, CD-ROM, Radio/Audio Cassette, Computers (Standalone, Network, and Computer-Mediated-Communication) and Interactive Video, with on-line demonstrations. Follow-up sessions, both in workshop and plenary modes, will explore the quality issues related to the use and evaluation of these media in distance and open learning, as well as the distribution and student services associated with distance learning systems.

Further details may be had for Ms Kerry Mann, Executive Secretary, EDEN, PO Box 92, Milton Keynes, MK7 6DX, United Kingdom.

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The first European Distance Education Network (EDEN) Academic and Professional Section Conference will be held on 28-30 September, 1993 at Downing College, Cambridge, UK. The theme of the conference is Quality Assurance in Open and Distance Learning: European and International Perspectives. Intended for persons wishing to discover and contribute to the professional community in open and distance learning in the wider Europe the conference will address the issues for open and distance learning of Quality Assurance. Quality Assurance has been adopted in many educational and training institutions, and there is wide interest in the processes and methods which aim to ensure that learners' needs are met. Challenging and critical perspectives will be encouraged as well as the contribution of practical experience from leading experts from a number of countries.

Further details may be had from Alan Tait/Roger Mills, EDEN A & P Conference, Open University, 12 Hills Road, Cambridge CB2, 1PF, United Kingdom.

We Congratulate .....

(1) Prof. S. Bashiruddin who has taken over as Vice-Chancellor of the Dr. B.R. Ambedkar Open University, Hyderabad.

(2) Dr. Avvai Natarajan who has been appointed Vice-Chancellor of the Tamil University, Thanjavur.

(3) Dr. Yogendra Alagh who has taken over as Vice-Chancellor of the Jawaharlal Nehru University, New Delhi.

KURUKSHETRA UNIVERSITY KURUKSHETRA

CORRIGENDUM

REFERENCE ADVERTISEMENT No. 5/92

Qualifications for the post of Lecturers in Hindi (2) for the Directorate of Correspondence Courses will be as laid down in the booklet attached with the application form. There will be no specialization for the post(s).

REGISTRAR

UNIVERSITY OF DELHI

DEPARTMENT OF COMPUTER SCIENCE

ADMISSION NOTICE

"MASTER OF COMPUTER APPLICATIONS — 1993"

Applications on the prescribed form are invited for admission to 3 years Degree Course in **"Master of Computer Applications" (MCA)** for the session starting from **July 15, 1993.**

Bulletin of Information alongwith Application form can be had from the Department against payment of Rs. 25/-(non-refundable) by a Bank Draft in favour of the Registrar, University of Delhi, payable at State Bank of India, Delhi University Branch.

Candidates desirous of obtaining the application form by post must send a self-addressed envelope (size 25 cm x 17.5 cm) with stamps worth Rs. 3/- affixed alongwith the Bank Draft to **Sh. S.K. Bose, Office In-charge, Department of Computer Science, Room No. 303, Arts Faculty Extension Building, University of Delhi, Delhi-110007.**

The admission test will be held in Delhi at the Department of Computer Science on **Sunday, February 28, 1993. Last date for submission of completed applications is January 15, 1993.**

HEAD

RESEARCH IN PROGRESS

A List of Research Scholars registered for Doctoral Degrees in Indian Universities

SOCIAL SCIENCES

Library & Information Science

1. Nithyanandam, K. **Job opportunities of library staff and the impact of technological innovations in the field of Library and Information Science.** Madras. Dr Manorama Srivastav, Lecturer, Department of Library and Information Science, University of Madras, Madras.

Museology

1. Gupta, Neeta. **Bharatiya Sangrahalayon mein Gandhar shaili kee murtiyan.** BHU. Dr S K Srivastava, Department of-Museology, Banaras Hindu University, Varanasi.

2. Rai, Sri Prakash. **Uttar Pradesh ke sangrahalyon mein shaikshanik gatividhiyan.** BHU. Dr S K Srivastava, Department of Museology, Banaras Hindu University, Varanasi.

Psychology

1. Aminollah Fazel. **A Study of cultural and gender differences on need for achievement, locus of control and vocational choices of gifted and average students.** Panjab. Dr (Mrs) Sudha Banth, Department of Psychology, Panjab University, Chandigarh.

2. Bartariya, Kalpana. **The Indian career women : A socio-psychological study of stress.** BHU. Dr (Mrs) R Mittra, Department of Psychology, Banaras Hindu University, Varanasi.

3. Chouhan, Devender Singh Dev. **Vyaktikarajnaitikdalkee pasandgi ke sandarbh mein manosamajik karkon ke prabhav ka adhyayan.** HS Gour. Dr P K Rai, Department of Psychology, Dr Harisingh Gour Vishwavidyalaya, Sagar.

4. Gurminder Kaur. **A study of organisational role stress of lawyers and judges in relation to type of behaviour, needs and locus of control.** Panjab. Dr (Mrs) Vidhu Mohan, Prof, Department of Psychology, Panjab Univesity, Chandigarh.

5. Nalwa, Kanwal. **A study of delinquency proneness as related to deprivation, need-structure and perception of child-rearing practices of adolescents.** Panjab. Dr (Mrs) Vidhu Mohan, Prof, Department of Psychology, Panjab University, Chandigarh.

6. Pathak, Kripa Shanker. **Individual differences in emotion processing.** BHU. Dr M K Mandal, Department of Psychology, Banaras Hindu University, Varanasi.

7. Sabherwal, Gauri. **A study of certain correlates of academic achievement in the orphanage-reared and home-reared childern.** Panjab. Dr (Mrs) P Verma, Reader, Department of Psychology, Panjab University, Chandigarh.

8. Singla, Sumira. **A study of creativity in relation to anxiety, anger and aggression at different levels of ego-strength.** Panjab. Dr L S Minhas, Department of Psychology, Panjab University, Chandigarh.

9. Srivastava, Vibha. **A study of life stress and its psychological moderators.** BHU. Dr A K Srivastava, Department of Psychology, Banaras Hindu University, Varanasi.

Sociology

1. Ajinder Kaur. **Socio economic differentials among the acceptors and non-acceptors of ICDS programme: A sociological study of anganwadis in Panjab.** Panjab. Dr (Mrs) R M Sethi, Department of Sociology, Panjab University, Chandigarh.

2. Harleen Kaur. **Organizational structure and professional socialization: A comparative study in two medical colleges of Delhi.** Panjab. Dr S R Mehta, Department of Sociology, Panjab University,Chandigarh.

3. Indu Kumari. **Manosharirik rugnata ke sandarabh mein atma pratyay ka adhyayan.** BHU. Dr Shashi Rani Agrawal, Department of Sociology , Banaras Hindu University, Varanasi.

4. Jatana, Anuradha. **Incidence and psycho-social determinants of non-rehabilitation after an acute myocardial infraction.** Panjab. Dr (Mrs) M K Teja, Department of Sociology, Panjab University, Chandigarh and Dr H K Bali, Asstt Prof, Department of Cardiology, Post Graduate Institute of Medical Sciences, Chandigarh.

5. Manmeet Kaur, **Migration and rural development: A sociological study in Himachal Pradesh.** Panjab. Dr K C Kaistha, Department of Sociology, Panjab University, Chandigarh.

6. Om Prakash. **Grameen jeevan mein kridha ka samaj shastriya adhyahan.** BHU. Dr R B Singh, Department of Physical Education and Dr H C Srivastava , Department of Sociology, Banaras Hindu University, Varanasi.

7. Pasricha, Seema. **Consequences of infant and child mortality for fertility behaviour: A socio-demographic study in rural areas of Haryana.** Panjab. Dr K C Kaistha. Department of Sociology, Panjab University, Chandigarh.

8. Prasad, Shweta. **Youth unrest.** BHU. Prof S Tripathi, Department of Sociology, Banaras Hindu University, Varanasi.

9. Ratnayake, Padma Glacilda. **A critical examination of the voluntaristic approach as an alternative strategy for third world development, Sri Lanka: Case study.** Panjab. Prof P N Pimpley, Department of Sociology, Panjab University, Chandigarh.

10. Shashi Bala. **Chikitsa vyavsaya mein mahilayon ka chitrakalp.** BHU. Dr O P Gupta, Department of Sociology, Banaras Hindu University, Varanasi.

11. Singh, Anand. **Vyavsayon per paschatya sanskriti ke prabhav ka ek samaj vaigyanik adhyayan.** BHU. Dr A L Srivastava, Department of Sociology, Banaras Hindu University, Varanasi.

12. Singh, Manoj Kumar. **Grameen vikas mein grameen bank ka yogdan.** BHU. Dr Mohd Salim, Department of Sociology, Banaras Hindu University, Varanasi.

13. Singh, Raghuraj Kumar. **Technology adoption and diffusion: A sociological study of selected villages in Sultanpur District.** BHU. Prof S Tripathi, Department of Sociology, Banaras Hindu University, Varanasi.

14. Singh , Vijay Kumar. **Mau Janpad ke shramikon kee samajik arthik sthiti.** BHU. Dr S R Yadav, Department of Sociology, Banaras Hindu University, Varanasi.

15. Srivastava, Vishesh Kumar. **Samajik avam shaikshanik pichharepan aur naveen arakshan yojna ka samaj vaigyanik vishleshan: Varanasi Nagar ke abhijano evam samanya jano per adharit. BHU. Dr J N Singh, Department of Sociology, Banaras Hindu University, Varanasi.**

16. Yangzes, Sonam. **Demographic dynamics of Ladakhi family.** Panjab. Dr K C Kaistha, Department of Sociology, Panjab University, Chandigarh.

Social Anthropology

1. Gupta, Sudha. **Caste and traditional economy as informal sector.** Delhi. Dr D K Bhattacharya, Department of Anthropology, University of Delhi, Delhi.

Social Work

1. Kuldip Singh. **Disease ecology and health care system in Hoshiarpur District of Panjab.** Panjab. Dr Sodhi Ram, Directorate of Correspondence Studies, Panjab University, Chadigarh.

Political Science

1. Dwivedi, Uma Shankar. **Pt Deendayal Upadhyaya ka rajnitik chintan evam samagra manavatavad.** BHU. Dr S K Awasthi, Department of Political Science, Banaras Hindu University, Varanasi.

2. Gupta, Raj Kumar. **Indian political thought.** BHU. Dr R P Pathak, Department of Political Science, Banaras Hindu University, Varanasi.

3. Jha, Kishore Kumar. **Hindu rashtravad aur Bharatiya Jansangh kee vaicharikl.** BHU. Dr S K Awasthi, Department of Political Science, Banaras Hindu University, Varanasi.

4. Joy, K. **Centre-state relations : A study on the role of Governors since 1984.** Kerala. Dr P J Alexander, Director, Institute of Management in Government, Vikas Bhavan, P O Thiruvananthapuram.

5. Mathew, Abraham. **Welfare administration in Kerala : A study on the role of panchayats.** Kerala. Dr P J Alexander, Director, Institute of Management in Government. Vikas Bhavan, P O Thiruvananthapuram.

6. Mukherjee, Suparna. **United States and ethics complication in South Africa.** BHU. Dr A S Upadhyaya, Depaartment of Political Science, Banaras Hindu University, Varanasi.

7. Nayak, Abha. **Bhartiya swantantrata andolan : Damoh Jile kee bhumika evam vishleshan.** HS Gour. Dr H M Khan, Head,Department of Political Science, Govt P G College, Damoh.

8. Neelam Devi. **Jai Prakash Narayan ke chintan mein Sarvodaya kee avadharana.** BHU. Dr A S Mishra, Department of Political Science, Banaras Hindu University, Varanasi.

9. Sankara Sastry, Kuppa Uma. **The administrative system in central universities in India with special reference to BHU.** BHU. Dr D D Nanda, Department of Political Science, Banaras Hindu University, Varanasi.

10. Singh, Renu. **A study of problems of tribals in India with special reference to Jharkhand Movement.** BHU. Dr P D Kaushik, Department of Political Science, Banaras Hindu University, Varanasi.

11. Singh, Seema. **Rashtriya andolan mein Hindu rastravad kee bhumika.** BHU. Dr R P Pathak, Department of Political Science, Banaras Hindu University, Varanasi.

12. Yadav, Ashok Kumar. **Rastriya punarnirman mein Rastriya Swyam Sevak Sangh kee bhumika.** BHU. Dr S K Awasthi, Department of Political Science, Banaras Hindu University, Varanasi.

Economics

1. Arun, T G. **Forest resources in regional development.** Kerala. Dr C Radhakrishnan Nair, Reader, Department of Economics, University of Kerala, Kariavattom.

2. Goyal, Anita. **Ujjain Jile mein bal shramikon ka samajik evamarthik adhyayan.** Vikram. Dr(Mrs) Sudha Murty, Prof and Head, Department of Economics, Vikram University, Ujjain.

3. Hawaldar Singh. **Regional variations in agricultural out-put in India.** BHU. Prof D K Srivastava, Department of Economics, Banaras Hindu University. Varanasi.

4. Jain, Alka. **Ujjain Sambhag mein swarojgar yojana: Pragati evam mulyankan.** Vikram. Dr (Mrs) Sudha Murty, Prof and Head, Department of Economics, Vikram University, Ujjain.

5. Joshi, Nikhil. **Ujjain Sambhag mein audhyogik vikas evam paryavaran pradooshan: Ek adhyayan.** Vikram. Dr (Mrs) Sudha Murty, Prof and Head, Department of Economics, Vikram University, Ujjain.

6. Mishra, Jai Lakshmi. **External resources and economic development.** BHU. Prof D K Mishra, Department of Economics, Banaras Hindu University, Varanasi.

7. Mishra, Sanjukta. **Problems and prospects of industrialisation : A case study of Sonebhadra District.** BHU. Prof D K Mishra, Department of Economics, Banaras Hindu Univesity, Varanasi.

8. Neema, Rajkumar. **Krishi evam grameen vikas yojanayon mein NABARD ka yogdan : Ujjain Jile ke vishesh sandarbh mein.** Vikram. Dr Ramrattan Sharma, Asstt Prof, Department of Economics, Vikram University, Ujjain.

9. Shaheen Ara. **Bhilai Ispat Sanyantra mein shram sambandh evam sharm kalyan, 1981-82.** Vikram. Dr Gajender Parakh, Asstt Prof, Department of Economics, Vikram University, Ujjain.

10. Sinha, Ranjeet Prasad. **Rural banks and agricultural development in Bhojapur District.** BHU. Dr (Mrs) M Srivastava, Department of Economics, Banaras Hindu University,Varanasi.

11. Vijayvargiya, Praesh Kumar. **M P ka sehkari chinni udyog evam anya kshetron se unka tulnatmak adhyayan.** Vikram. Dr Harish Pradhan, Prof,Department of Economics, Vikram University, Ujjain.

Law

1. Bal Mukund. **Third generation of human rights in International Law.** BHU. Shri D P Varma, Department of Law, Banaras Hindu University, Varanasi.

2. Prasad, Narendra Bahadur. **Constitutional Safeguards for scheduled caste and scheduled tribes in India : Problems and perspectives.** BHU. Dr G P Varma, Department of Law, Banaras Hindu University, Varanasi.

Public Administration

1. Soni, Sita. **Mandla Jile mein advasi vikas khandon ka prashasan.** HS Gour. Dr S S Sodhi, Department of Public Administration, Dr Harisingh Gour Vishwavidyalaya, Sagar.

Education

1. Amarpreet Singh. **Relationship of varying levels of motor fitness to socio-economic status and structural variations among school students in the age group of 14 to 16 years.** Panjab. Shri Gurbakshash Singh Sandhu, Department of Physical Education, Panjab University, Chandigarh.

2. Dey, Sahana. **Cognitive preferences in Biology of junior high school normal and visually impaired students.** BHU. Dr H C S Rathore, Department of Education, Banaras Hindu University, Varanasi.

3. Kismat Ram. **Effectiveness of Vedic method in understanding of concepts in Mathematics.** BHU. Dr S D Chatterjee, Department of Education, Banaras Hindu University, Varanasi.

4. Man Singh. **Prachin Bharatiya shiksha vyavastha ka adhunik peripreksya mein mulyankan.** BHU. Dr U C Rai, Department of Education, Banaras Hindu University, Varanasi.

5. Mondoh, Helen Omondi. **Mathematics education.** BHU. Dr Paramanand Singh, Department of Education, Banaras Hindu University, Varanasi

6. Paras Nath. **Anath vidyarthiyon ke vyaktitva visheshkon evam chetan vanchiton ka ek adhyayan.** BHU. Dr S D Chatterjee, Department of Education, Banaras Hindu University, Varanasi.

7. Sangya. **A study of Dr Annie Besant's contribution to educational thought and practice.** BHU. Dr K Rai, Department of Education, Banaras Hindu University, Varanasi.

8. Sharma, Upma. **An evaluation of vocational education stream in senior secondary schools of Chandigarh.** Panjab. Dr (Mrs)Tehal kohli, Department of Education, Panajb University, Chandigarh.

9. Singh, Archana. **A relative potential of some personality and attitudinal characteristics as predictors of Mathematical creativity.** BHU. Dr P C Shukla, Department of Education, Banaras Hindu University, Varanasi.

10. Singh, Laiphrakpan Kumar. **Physique and physiological correlations with athletic performance.** BHU. Dr S S Sharma, Department of Physical Education, Banaras Hindu University, Varanasi.

11. Singh, Om Prakash. **Prachin Bharat mein saikshik bhrashtachar.** BHU. Dr S D Chatterjee, Department of Education, Banaras Hindu University, Varanasi.

12. Singh, Renu. **An investigation of relationships between values and communality among P G students and teachers.** BHU. Dr P N Singh, Department of Education, Banaras Hindu University, Varanasi.

13. Singh, Seema, **Educational needs, relevant curriculum and rehability expectations of handicapped childern.** BHU. Dr H K Singh, Deartment of Education, Banaras Hindu University, Varanasi.

14. Srivastava, Neelam. **Education decision making styles of principals.** BHU. Dr Asha Pandey, Department of Education, Banaras Hindu University, Varanasi.

15. Tripathi, Sneh. **Comparative study of comnputer assisted learning and learning by teaching material of high school students.** BHU. Dr Asha Pandey, Department of Education, Banaras Hindu University, Varanasi.

Commerce

1. Bapat, Vikas. **Madhya Pradesh Rajya Sarak Parivahan Nigam ke vittiya prabandh ka alochnatmak mulyankan.** HS Gour. Dr J K Jain, Department of Commerce, Dr Harisingh Gour Vishwavidyalaya, Sagar.

2. Bhagat, Pushpa. **Poorva Nimar Jilhantragat grameen sakh ke kshetra mein Nimar Kshetriya Grameen Bank ka yogdan : Ek vishleshnatmak adhyayan.** HS Gour. Dr R P Varma, Department of Commerce, S N Government P G College, Khandwa.

3. Chaube, Ashok Kumar. **Sagar Jile kee sarvajanik vitran pranali kee sangathnatmak rachna: Karyaparnali evam bhumika ka alochnatmak mulyankan.** HS Gour. Prof R K Bharti, Department of Commerce, Dr Harisingh Gour Vishwavidyalaya, Sagar.

4. Choukse, Madan Mohan. **Sagar Sambhag mein khanij adharit udyogon ka vikas, samsyayen evam sambhavanayen.** HS Gour. Dr Sanjeev Dube, Asstt Prof, Government Girls College, Sagar.

5. Jain, Amar Kumar. **Sagar Sambhag mein gehun utpadan, kshetra evam utpadakta kee parivartansheel pravrittiyon ka adhyayan, 1981- 1990 ke doran.** HS Gour. Dr O P Agrawal, Department of Commerce, Dr Harisingh Gour Vishwavidyalaya, Sagar.

6. Jain, Mukesh Kumar. **Jabalpur Sambhag mein grameen rojgar karyakarmon ka kriyanavayan: Ek alochnatmak mulyankan.** HS Gour. Prof R K Bharti, Department of Commerce, DrHarisingh Gour Vishwavidyalaya, Sagar.

7. Jaiswal, Manoj Kumar. **Madhya Pradesh Audyogik Vikas Nigam : Sangathan, karyapranali evam uplabdhiyon ka mulyankan.** HS Gour. Prof R K Bharti, Department of Commerce, Dr Harisingh Gour Vishwavidyalaya, Sagar.

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Home Science

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HUMANITIES

Philosophy

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Religion

1. Acharya, Urmila. **Buddhism in Orissa..** BHU. Dr P Dubey, Department of Pali and Buddhist Studies, Banaras Hindu University, Varanasi.

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Language & Literature

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German

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Sanskrit

1. Anil Kumar. **Skand Swami ke Rigvedia Bhashya ka sameekshatmak adhyayan.** Panjab. Dr B B Chaubey, Vishveshavaranand Vishwa Bandhu Institute of Sanskrit and Indological Studies, Panjab University, Hoshiarpur.

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11. Pandey, Ranjana. **Rigveda ke Ushas Sukton ka alochantmak adhyayan.** BHU. Dr U P Singh, Department of Sanskrit, Banaras Hindu University, Varanasi.

12. Pandey, Sudha. **Tantra vartik: Ek parisheelan.** BHU. Dr J G Ratate, Department of Sanskrit, Banaras Hindu University, Varanasi.

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19. Shankhyan, Des Raj. **Kashtarpati Chrit Mahakavye avyatatva vimarshah.** Panjab. Dr Ghanshyam Sharma, Vishveshavaranand Vishwa Bandhu Institute of Sanskrit and Indological Studies, Panjab University, Hoshiarpur.

20. Sharma, Manoj Kumar. **Mahabharat ke vanparv aur Kirtarjuniva mahakavya ka niti tattvon ke paripekshya mein tulnatmak adhyayan.** Panjab. Dr Jai Narain Sharma, Vishveshavaranand Vishwa Bandhu Institute of Sanskrit and Indological Studies, Panjab University, Hoshiarpur.

21. Sharma, Poonam. **Ananda Kanda Campu: Ek alcohnatmaka parisheelan.** Panjab. Dr Virendra, Department of Sanskrit, Panjab University, Chandigarh.

22. Sharma, Ramesh Chand. **Khistubhagvatam: Ek alochanatmak anusheelan.** Panajab. Dr Trilochan Singh Bindra, Vishveshavaranand Vishwa Bandhu Institute of Sanskrit and Indological Studies, Panjab University, Hoshiarpur.

23. Sharma, Ravinder Kumar. **Ishvar pratybhigyavibhar shini mein shakti kee avdharana: Ek anusheelan.** Panjab. Prof Ved Prakash Upadhyaya, Department of Sanaskrit, Panjab University, Chandigarh.

24. Sharma Bhardwaj, Rama Nand. **Goraksh Paddhateh: Samalochanatmakam adhyayanam.** Panjab. Dr D R Sharma, Department of Sanskrit, Panjab University, Chandigarh.

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31. Upadhyaya, Purna Chandra. **Chakrapani Vijaya Mahakavyasya, sameekhyatmakana adhyayanam tikopatam, sampadanancha.** HS Gour. Prof R V Tripathy, Department of Sanskrit, Dr Hari Singh Gour Vishwavidyalaya, Sagar.

32. Usha Kumari. **Laghutrayi mein pratipadit nititattvon ka sameekshatmaka adhyayan.** Panjab. Dr Ghanshyam Sharma, Vishveshavaranand Vishwa Bandhu Institute of Sanskrit and Indological Studies, Panjab University, Hoshiarpur.

33. Verma, Shalini. **Bharatiya darshana mein Visvarupadeva ka yogdan: Vivekamartandake vishesha sandarbha mein.** Panjab. Dr D R Sharma, Department of Sanskrit, Panjab University, Chandigarh.

Punjabi

1. Avtar Singh. **Mian Mohammad Bakhsh de Punjabi kav sidhant ate kav parampara dee ithaskari da alochnatmak mulankan: Saffal Maluk de vishesh parsang vich.** Panjab. Dr Attar Singh, Department of Sheikh Baba Farid Chair, Panjab University, Chandigarh.

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3. Baljinder Kaur. **Gurdial Singh Phul de natakan da alochnatmak adhyayan.** Panjab. Dr Manjit Singh, School of Punjabi Studies, Panjab University, Chandigarh.

4. Darshan Singh. **Mahima Prakash Vartak Granth da sampadan te alochnatmak adhyayan. Panjab. Dr Jagtar Singh, Govt College, Hoshiarpur.**

5. Gulzar Mohammad. **Punjabi kahani, 1975-90 vich yatharth de rupantran da adhyayan.** Panjab. Dr Jagjit Singh, School of Punjabi Studies, Panjab University, Chandigarh.

6. Gurjit Kaur. **Mohan Singh dee kavita da sabhiacharak sandarbh.** Panjab. Prof Attar Singh, Department of Sheikh Baba Farid Chair, Panjab University, Chandigarh.

7. Gursharan Kaur. **Ajmer Singh Aulakh ate Dr Charan Dass Sidhu de natakan da sabhiacharak sandarbh: Ik adhyayan.** Panjab, Dr A S Kahlon, Lecturer, Department of Punjabi, Govt College, Ludhiana.

8. Harminder Singh. **Punjabi Sufi kav de vichardhari adhar.** Panjab. Dr Attar Singh, Department of Sheikh Baba Farid Chair, Panjab University, Chandigarh.

9. Hukam Singh. **Bhai Veer Singh te William Wordsworth de prakriti-kav da tulnatmak adhyayan.** Panjab. Dr Naresh, Department of Bhai Vir Singh Chair, Panjab University, Chandigarh and Prof M L Raina, Department of English, Panjab University, Chandigarh.

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13. Iqbal Singh. **Bulleh Shah de kav da chehan-vigyanak adhyayan.** Panjab. Dr Jagjit Singh, Reader, School of PunjabiStudies, Panjab University, Chandigarh.

14. Jagjit Singh. **Novian Dahake de Punjabi natak da alochnatmik adhyayan.** Panjab. Dr Manjit Singh, Lecturer, School of Punjabi Studies, Panjab University, Chandigarh.

15. Japinder Kaur. **Ram Sarup Ankhi de galp sahit da samajik-sanskritik adhyayan.** Panjab. Dr Surinder Kumar Deweshwar, Department of Punjabi Lexicography, Panjab University, Chandigarh.

16. Jasbir Singh. **Punjabi Sufi kav vich Sarodi Tatta Baba Farid, Shah Husain, ate Bulhe Shah de vishesh sandarbh vich.** Panjab. Dr Raghbir Singh, School of PunjabiStudies, Panjab University, Chandigarh.

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23. Rajbir Kaur. **Shah Hussain de kav da chehan vigianik adhyayan.** Panjab. Dr Jagjit Singh, School of Punjabi Studies, Panjab University, Chandigarh.

24. Rama Kumari. **Dawabi da up-bhashai sarvekhan: Hoshiarpur Zile de parsang wich.** Panjab. Dr Jagjit Singh, School of Punjabi Studies, Panjab University, Chandigarh.

25. Vidya Vati. **Guru Ravidas Bani da shilap vidhan.** Panjab. Dr Krishna Kalsia, Department of Guru Ravi Dass Chair, Panjab University, Chandigarh and Dr D P Singhal, House No.26, Sector 22/A, Chandigarh.

Hindi

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5. Kukreja, Rajni. **Manav mulya parak Hindi shodh sahitya vishleshan evam mulayankan.** Panjab. Dr D P Maini, Department of Hindi, Panjab University, Chandigarh.

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8. Meghnani, Vishu. **Adhunik Hindi upanyason ke vikas mein lekhikayon kee bhumika, san 1960 se 1980 tak.** BHU. Dr V M Tripathi, Department of Hindi, Banaras Hindu University, Varanasi.

9. Mehrotra, Lajo. **Kavita ke naye pratimanon ke paripreksya mein nai kavita.** BHU. Dr Ramkali Saraf, Department of Hindi, Banaras Hindu University, Varanasi.

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Urdu

1. Farzana Nasim. **Urdu novel mein mutavasit tabqe kemasail.** Panjab. Dr M Shakeel Khan, Reader, Department of Urdu, Panjab University, Chandigarh.

2. Khan, Diwan Hannan. **Kutubkhana-e-Murshidabad ke Urdu akhtootat.** BHU. Dr Nasim Ahmad, Lecturer, Department of Urdu, Banaras Hindu University, Varanasi.

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5. Syed Nashir Hussain. **Urdu ke Sikh shoara: Ek tajziyati mutaliea.** Panjab. Dr M Shakeel Khan, Reader, Department of Urdu, Panjab University, Chandigarh.

Bengali

1. Chatterjee, Putul. **Hindi chhayavadi kavi: Rabindra-pratikriya O Rabindra-prabhab.** BHU. Dr (Mrs) Aloka Chatterjee, Department of Bengali, Banaras Hindu University, Varanasi.

Arabic

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Malayalam

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Telugu

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Geography

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5. Mantri, Alpana. **Impact of Indira Canal on agriculture.** BHU. Prof V R Singh, Department of Geography, Banaras Hindu University, Varanasi.

6. Meenakshi. **Urban water supply and waste water management of Varanasi City.** BHU. Dr R Bilas, Department of Geography, Banaras Hindu University, Varanasi.

7. Mishra, Vijay Prakash. **Problem and prospect of rural development in Maharajganj District: A geographical study.** BHU. Dr Usha Singh, Department of Geography, Banaras Hindu University, Varanasi.

8. Padmavati, V. **Impact of urbanization in U P.** BHU. Dr (Mrs) Usha Singh, Department of Geography, Banaras Hindu University, Varanasi.

9. Regmi, Prakash Bandhu. **Migration trend and its impact on environment: A case of Lumbini Zone, Nepal.** BHU. Dr R P B Singh, Department of Geography, Banaras Hindu University, Varanasi.

10. Shashi Bhushan. **Geographical analysis of urban settlements in Ghazipur District.** BHU. Dr S B Singh, Department of Geography, Banaras Hindu University, Varanasi.

11. Shukla, Bihari. **Morphology of towns in Rohtas District, Bihar: A geographical analysis.** BHU. Shri S P Singh, Department of Geography,Banaras Hindu University, Varanasi.

12. Singh, Jitendra Narayana. **Population and rural settlement pattern in Bhabua District, Bihar.** BHU. Dr (Mrs) U Singh, Department of Geography, Banaras Hindu University, Varanasi.

13. Singh, Narendra Pratap. **Jamania Vikas Khand ke seva kendron ke gramin vikas mein yogdan: Ek bhogaulik adhyayan.** BHU. Dr S B Singh, Department of Geography, Banaras Hindu University, Varanasi.

14. Singh, Raghawendra. **A geographical study of poverty, nutrition and deficiency related diseases in Pachewara Nyay Panchaya, District, Mirzapur.** BHU. Dr M B Singh, Department of Geography, Banaras Hindu University, Varanasi.

15. Singh, Rakesh. **Rural water supply: Problem and managment; a geographical study of Ghazipur District.** BHU. Dr (Mrs) U Singh, Department of Geography, Banaras Hindu University, Varanasi.

16. Singh, Sandhya. **Urban housing problems and planning of Varanasi City: A geographical study.** BHU. Dr S B Singh, Department of Geography, Banaras Hindu University, Varanasi.

17. Singh, Shiva Priya. **Varanasi durign 18th and 19th century: A study in cultural geography.** BHU. Dr R P B Singh, Department of Geography, Banaras Hindu University, Varanasi.

18. Singh, Virendra Kumar. **Industrial development pattern in Lucknow and its environs: A geographical analysis.** BHU. Dr M B Singh, Department of Geography, Banaras Hindu University, Varanasi.

19. Sunil Pratap. **The study of urban development: a case study of Patna District.** BHU. Dr J Singh, Department of Geography, Banaras Hindu University, Varanasi.

20. Tripathi, Dinesh Kumar. **Agricultural change and its developmental planning in Faizabad District.** BHU. Dr S P Mishra, Department of Geography, BanarasHindu University, Varanasi.

History

1. Ajmer Singh. **The military campaigns of Maharaja Ranjit Singh and under his successors.** Panjab. Dr G S Dhillon, Reader, Department of Evening Studies, Panjab University, Chandigarh.

2. Akshyabar Prasad. **Satvahan kaleen vanijya evam vyapar.** BHU. Dr Rajeshwar Pandey, Department of History, Banaras Hindu University, Varanasi.

3. Asha Kumari. **Bhoj Parmar aur unka yug.** BHU. Prof M Prasad, Department of Ancient Indian History, Culture and Archaeology, Banaras Hindu University, Varanasi.

4. Bhatt, Vibhas. **Guptakaleen kar vyavastha.** BHU. Dr J S Mishra, Department of History, Banaras Hindu University, Varanasi.

5. Devanand Singh. **Gahadwal kaleen Bharatiya sanskriti.** BHU. Prof Lallanji Gopal, Ancient Indian History, Culture and Archaeology, Banaras Hindu University, Varanasi.

6. Harsimran Kaur. **Working women of Ancient India, from the earliest times to C A D 1200.** Panjab. Dr Ashwini Agrawal, Depart-

ment of Ancient Indian History, Culture and Archaeology, Panjab University, Chandigarh.

7. Mishra, Sudhir Kumar. **Political life of Varanasi, 1920-47.** BHU. Dr A S Singh, Department of History, Banaras Hindu University, Varanasi.

8. Parveen. **The image of women in socio-religious reform literature in the Panjab, late nineteenth century-early twentieth century.** Panjab. Dr Kamlesh Mohan, Reader, Department of History, Panjab University, Chandigarh.

9. Pathak, Rajesh. **Maurya kaleen kar vyavastha.** BHU. Dr J S Mishra, Department of History, Banaras Hindu University, Varanasi.

10. Rai, Satya Nand. **Yogvashista mein Ram ka swaroop.** BHU. Prof P C Pant, Department of Ancient Indian History, Culture and Archaeology, Banaras Hindu University, Varanasi.

11. Rajput, Savitri. **Ayurvedic Samhita mein darhsan.** BHU. Prof M Prasad, Department of Ancient Indian History, Culture and Archaeology, Banaras Hindu University, Varanasi.

12. Saxena, Sarita. **Surpal krita Vriksheyuraveda ka adhyayan.** BHU. Prof Lallanji Gopal, Department of Ancient Indian History, Culture and Archaeology, Banaras Hindu University, Varanasi.

13. Sharma, Jai Prakash. **Varang Charit: Ek sanskritik adhyayan.** BHU. Dr N Ahmad, Department of Ancient Indian History, Culture and Archaeology, Banaras Hindu University, Varanasi.

14. Sharma, Mahesh. **Siddh worship in Himachal Pradesh: Study of a popular cult in historical perspective.** Panjab. Dr (Mrs)Karuna Goswamy, Reader, Department of History, Panjab University, Chandigarh.

15. Sharma, Mandeep Kumar. **British perceptions of the Indian nationalism: A study of the Cambridge School.** Panjab. Dr J S Dhanaki, Reader, Department of History, Panjab University, Chandigarh.

16. Sharma, Satyendra Nath. **Prachin Bharatiya kala mein apshara.** BHU. Dr P N Singh, Department of Ancient Indian History, Culture and Archaeology, Banaras Hindu University, Varanasi.

17. Shukla, Alok Kumar. **Prachin Bharatiya sahitya, kala evam dharm mein saptmtrika.** BHU. Prof V C Srivastava, Department of Ancient Indian History, Culture and Archaeology, Banaras Hindu University, Varanasi.

18. Sindhu, Sarabjit . **Asceticism: A socio-historic approach.** Panjab. Prof S N Chopra, Department of Ancient Indian History, Culture and Archaeology, Panjab University, Chandigarh.

19. Singh, Ram Pratap. **Uttar vaidik kaleen dharma.** BHU. Dr Birendra Pratap Singh, Department of Ancient Indian History, Culture and Archaeology, Banaras Hindu University, Varanasi and Dr A L Yadav, Department of Ancient Indian History, Culture and Archaeology, Banaras Hindu University, Varanasi.

20. Singh, Wahengbam Ibomcha. **Rasa in Ancient Indian sculpture upto 12th century A D.** Panjab. Dr D K Handa, Reader, Department of Ancient IndianHistory, Culture and Archaeology, Panjab University, Chandigarh.

21. Sinha, Pratibha. **Interaction between religious cults and gilds in Ancient India.** BHU. Prof V C Srivastava, Department of Ancient Indian History, Culture and Archaeology, Banaras Hindu University, Varanasi.

22. Srivastava, Mamta. **Bharatiya sahitya, kala aur dharma mein Haritee.** BHU. Prof P C Pant, Department of Ancient Indian History, Culture and Archaeology, Banaras Hindu University, Varanasi.

23. Tiwari, Jitendra. **Bharat aur Nepal ke prachin sanskritik sampark.** BHU. Prof P C Pant, Department of Ancient Indian History, Culture and Archaeology, Banaras Hindu University, Varanasi.

24. Upadhyaya, Dilip Kumar. **Ceramic industries of the Sarajupar Plains from Ancient times to 2nd century B C.** BHU. Prof P Singh, Department of Ancient Indian History, Culture and Archaeology, Banaras Hindu University, Varanasi.

25. Verma, Premendra Yusuf. **America's policy towards India, 1945-53.** Panjab. Dr R C Jauhri, Department of History, Panjab University, Chandigarh.

THESES OF THE MONTH

A list of Doctoral Theses accepted by Indian Universities

SOCIAL SCIENCES

Library & Information Science

1. Gupta, Anuradha. **A study of growth, development and services of Government of India Libraries located in Delhi.** Delhi.

2. Maheswarappa, B S. **A bibliometric analysis of phytopathology literature.** Gulbarga. Dr S L Sangam, Reader and Chairman, Department of Library and Information Science, Karnatak University, Dharwad.

Psychology

1. Aneesuddin, M. **Psychological dimensions of rural poverty.** Osmania.

2. Gondalia, Dhirajlal Vaghjibhai. **A study of the impact of self-awareness upon the job-satisfaction among the engineers of Gujarat.** Patel. Dr J C Parikh, Department of Psychology, Sardar Patel University, Vallabh Vidyanagar.

3. Maqbool, Shahina. **A study of sensation seeking behaviour among drug abuse inpatients in relation to certain personality and health related variables.** AMU. Dr Akbar Husain, Lecturer, Department of Psychology, Ailgarh Muslim University, Aligarh.

4. Manju. **A study of relationships between job motivation, supervisory styles and demographic varibales.** AMU. Prof S Sultan Akhtar, Head, Department of Psychology, Aligarh Muslim University, Aligarh.

5. Vadra, Prerna. **A study of attitude towards life in relation to social and personality variables among alcoholics.** AMU. Dr Akbar Husain, Lecturer, Department of Psychology, Aligarh Muslim University, Aligarh.

Sociology

1. Kumavat, Radhey Shyam. **Jhabua Jile ke adivasiyon mein apradh: Ek samajshastriya adhyayan.** Vikram. Dr M L Gupta, Prof, Department of Sociology, Madhav College, Ujjain.

2. Paul, Ravinder. **Trade union dynamics in hosiery mills: A study of Ludhiana District.** Punjabi. Dr G S Bhatnagar, Prof, Department of Sociology, Punjabi University, Patiala.

3. Sengupta, P B. **Colliery workers and social progress: An evaluation of specific entity.** D.Litt. Durgawati. Dr R K Gupta, Prof and Head (Retd), Department of Sociology, Rani Durgawati Vishwavidyalaya, Jabalpur.

Social Work

1. Anandaraj, Hannah. **Adjustement among adolescents in slums: A study in the city of Hyderabad.** Andhra.

2. Nirmala, B P. **Emotional distrubances among the prisoners.** Bangalore. Dr N Venkataswamy Reddy, Chairman, Department of Social Work, Bangalore University, Bangalore.

Political Science

1. Bhardwaj, Ramdev. **Leadership and Indonesian Nationalism: A study of Sukarno.** Durgawati. Dr S C Tiwari, Prof and Head, Department of Political Science, Rani Durgawati Vishwavidyalaya, Jabalpur.

2. Biswas, Swapan Kumar. **The Andaman and Nicobar Islands: Some problems of their modernisation with reference to two ethnic groups.** Rabindra Bharati

3. Chandrakar, Ajay Kumar. **Chhattisgarh mein anusuchit jatiyon kee rajnaitik vyavastha mein prabhavsheelta: Satnami Jati kee bhumika ka adhyayan.** Ravishankar. Dr R N Mitra, Prof (Retd), Near Santoshi Mandir, Raja Talab, Raipur.

4. Changkakati, Sunita. **Impact of urbanization and modernization on tribal villages of Assam: A study of the Rabha villages of Odalbakra and Rajapala-in-Kamrup District, Assam.** Gauhati. Dr Deba Brat Sharma, Reader, Department of Political Science, Gauhati University, Guwahati.

5. Dakshina Murthy. **Public policy-impact and effectiveness of populist policies of T D P Government: A study of Khammam District.** Osmania.

6. Ghosh, Indrani. **Political questions and the Supreme Courts of the USA and India: A study on a dynamic aspect of comparative Constitutional politics.** Rabindra Bharati.

7. Hamida Banu. **The local self government and rural development in Bangladesh, 1971-88.** AMU. Prof A F Usmani, Head, Department of Political Science, Aligarh Muslim University, Aligarh.

8. Jiley Singh. **Agrarian transformation and caste politics in Western Uttar Pradesh.** HP.

9. Kaliyaperumal, M. **The office of the Sepaker in Tamil Nadu: A study.** Madras.

10. Kazmi, Mohammad Fareed Uddin. **Cinema and ideology: Study of Hindi conventional films, 1973-87.** Delhi.

11. Nyusztay, Laszlo. **Political thought and practice in Egypt: The Nasser Era.** JNU. Prof Mohammad Sadiq, Centre for West Asian and African Studies, Jawaharlal Nehru University, New Delhi.

12. Pathak, Yogesh Kumar. **Soviet intervention in Afghanistan: A study of its impact on public opinion in India and Pakistan.** JNU. Prof R C Sharma, Centre for International Politics, Organization and Disarmament, Jawaharlal Nehru University, New Delhi.

13. Patton, Anthony. **Financing of higher education in the North-East-Region: A study in grants-in-aid.** Gauhati. Dr V V Rao, Emeritus Prof, Department of Political Science, Gauhati University, Guwahati.

14. Singh, Kiran. **Mahashaktiyan aur asanlaganta.** Ravishankar. Dr R N Mitra, Prof (Retd), Near Santoshi Mandir, Raja Talab, Raipur.

Economics

1. Chakraborti, Ahindra. **Economic rates of return of companies assisted by the All India Financial Institutions.** Burdwan. Prof Paresh Chattopadhyay, Department of Business Administration, University of Burdwan, Burdwan.

2. Dave, Bharati D. **A study on the decentralised planning in Gujarat.** Bhavnagar. Dr I M Trivedi, Prof and Head, Department of Economics, Bhavnagar University, Bhavnagar.

3. Dubey, Narayana Prasad. **Impact of district credit plan on the rural economics of Ujjain District.** Vikram. Dr G K Parekh, Asstt Prof, Department of Economics, Vikram University, Ujjain.

4. Gupta, Virender Bhushan. **The Dutch East India Company in Gujarat trade, 1660-1700: A study of selectd aspects.** Delhi.

5. Manjeet Kaur. **A study into economic disparity in the rural sector of Panjab.** PAU.

6. Maulik, Jyotiprakas. **Financing of the cooperative sector: A case study for West Bengal, 1955-75.** Calcuta.

7. Md Abdus Salam. **Impact of monetary management on India's balance of payments during 1960-86.** AMU. Prof (Mrs) K S Khan, Head, Department of Economics, Aligarh Muslim University, Aligarh.

8. Milkho Kaur. **Growth and linkages between agriculture and industry in Panjab.** PAU.

9. Mitra, Gautam Kumar. **Levels of living, poverty and inequality in rural sector: A comparative analysis of three Districts of Andhra Pradesh.** Andhra.

10. Mohd Izhar Ahmad. **A comparative study of organized and unorganized small scale industries of Aligarh City.** AMU. Prof A Z Rizvi, Department of Economics, Aligarh Muslim University, Aligarh.

11. Munish Kumar. **Pricing of irrigation in Panjab.** Punjabi. Dr H K Manmohan Singh, Vice-Chancellor, Punjabi University, Patiala.

12. Ravindra Kumar, K. **Landless agricultural labourers and poverty alleviation programmes in North Arcot District.** Madras.

13. Regmi, Govind Prasad. **Industrial growth in Nepal: A sectoral and regional analysis.** JNU. Dr R K Sharma and Prof GS Bhalla, Centre for the Study of Regional Development, Jawaharlal Nehru University, New Delhi.

14. Shakuntla Devi. **An analytical study of production and marketing of oilseeds in the Panjab.** Punjabi. Dr Baldev Singh, Prof, Department of Economics, Punjabi University, Patiala and Dr Balwinder Singh, Economist, Department of Economics and Sociology, Punjab Agricultural University, Ludhiana.

15. Siddiqui, Md Idris. **Impact of modernisation on agriculture in Shahjahanpur: A comparative study of two blocks.** AMU. Prof Mahmood A Raz.

16. Siraj Uddin Ahmed. **Impact of the changing structure of jute industry on strategic management of business firms.** AMU. Prof Azhar Kazmi, Department of Business Administation, Aligarh Muslim University, Aligarh.

17. Vijaya Kumar, K. **Cement industry in India with special reference to production/demand.** Osmania.

18. Walia, Rozy. **Resource mobilisation in India's corporate sector.** Punjabi. Dr Govind Khanna, Prof (Retd), Department of Economics, Punjabi University, Patiala.

Law

1. Dubey, Nisha. **Euthansia: An inter-disciplinary study.** Devi Ahilya. Dr G C Kasliwal, 24 Sarvodaya Nagar, Indore.

2. Khera, Sukhdershan Singh. **A study of treatment of female offenders in police lock-ups and prisons in Panjab.** Punjabi. Prof Gurpal Singh, Department of Law, Punjabi University, Patiala and Dr Virendra Kumar, Secretary to Vice Chancellor, Panjab University, Chandigarh.

3. Thakur, Pushpa. **Implementation of women's welfare legislation and public opinion of India.** Vikram. Dr G C Kasliwal, 24 Sarvodaya Nagar, Indore.

Public Adminisrtation

1. Ahirwar, Bhagwan Das. **Madhya Pradesh ke adivasi vikas evam prashasan ke sandarbh mein Jagdalpur Tehsil ke adivasi vikas karyakram ka vishleshan, 1980-85.** HS Gour. Dr (Smt) Shobha Shankar, Department of Political Science and Public Administration, Dr Hari Singh Gour Vishwavidyalaya, Sagar.

2. Benjamin, P Ebenzer. **Thalapathy Azhagiri Transport Corporation: A study in organization and management of state level public enterprises.** Madras.

3. Ratnam, Kanchana. **Rural development programmes in Tamilnadu: A study.** Madras.

4. Saini, Sarvjeet Singh. **Administration of some state electricity boards with special reference to project formulation, implementation and evaluation.** HP.

Education

1. Antony, Rose Anne. **A study of the management of higher secondary education system in the State of Tamil Nadu with respect to the administrative behaviour of the heads of the institute.** Patel. Dr A V Patel, Lecturer, Department of Education, Sardar Patel University, Vallabh Vidyanagar.

2. Daljit Inder Singh. **A study of motor abilities, physical and physiological characteristics of male adolescent gymnasts, track and field athletes and non-sportsman.** Punjabi. Dr T S Sodhi, Department of Education, Punjabi University, Patiala.

3. Das, Mamata. **Approaches of learning and academic performance of students in traditional and open universities: A comparative study.** JNU. Dr Sushila Singhal, Zakir Husain Centre for Educational Studies, Jawaharlal Nehru University, New Delhi.

4. Dutta, Golok Chandra. **Socio-economic life of the people and its impact on children's education with particular refernce to Lakhimpur District, Assam.** Gauhati. Dr Birendra Kumar Talukdar, Rader (Retd), Department of Education, Gauhati University, Guwahati.

5. Elias, M. **Study of psycho-social correlates of adult learning and development in slected literacy centres in Cnengai- Anna District of Tamilnadu.** Madras.

6. Kamlesh Kumari. **Creativity of ninth graders in relation to their socio-economic status, achievement motivation and adjustment.** Punjabi. Dr R P Goyal, Reader, Department of Education, Punjabi University, Patiala.

7. Kher, Ushaben Kiranshinh. **A study of the contribution of Shri Mota to the educational thoughts, practices and development of education in the State of Gujarat.** Patel. Dr A V Patel, Lecturer, Department of Education, Sardar Patel University, Vallabh Vidyanagar.

8. Mahajan, Sanjay. **Development of computer software for automation of the diploma course in computer education.** Devi Ahilya. Dr D R Goyal, Asstt Prof, Department of Education, Devi Ahilya Vishwavidyalaya, Indore.

9. Nongrum Medalin. **A study of job satisfaction of secondary school teachers in Shillong and leadership characteristics of the heads/principals.** NEHU. Dr D S Babu, No 1-2-595/36, Gagar Manal Colony, Domalguda, Hyderabad.

10. Rajaram. **Development of human resources at the district level educational administation in Tamil Nadu.** Madras.

11. Rangappa, K T. **Self-concept, reading ability in relation to achievement in Mathematics of students of VII standard.** Bangalore. Dr D S Shivananda, Principal, Sri Sarvjana College of Education, Bangalore.

12. Ravinder Jeet Kaur. **A comparative study of the educational philosophies of Sri Aurobindo and Mahatma Gandhi and their relevance to modern educational system.** Punjabi. Dr T S Sodhi, Reader and Head, Department of Education, Punjabi University, Patiala.

13. Saikia, Siddharth. **Growth of higher education in Assam and its impact on the socio-economic life of the Assamese people.** Gauhati. Dr P C Das, Reader, Department of Education, Gauhati University, Guwahati.

14. Somasundara Sastry, Potukoochi. **A study of academic motivation in relation to classroom climate, origin and pawn and academic achievement among IX class students of some selected secondary schools in Andhra Pradesh, Krishna District.** Andhra.

15. Vermani, Manjeet Kaur. **Development of learning packages for illiterate adults of Panjab.** Punjabi. Dr R P Goel, Reader, Department of Education, Punjabi University, Patiala.

Commerce

1. Choubey, Bhagwat Sharan. **Madhya Pradesh mein samanya beema vyavsaya: Sagar evam Jabalpur Sambhag ke vishesh sandarbh mein.** HS Gour. Prof R K Bharati, Head, Department of Commerce, Dr Hari Singh Gour Vishwavidyalaya, Sagar.

2. Ghatak, Anjan Kumar. **Financing of inventory in the public sector: A study with reference to selected Central Government companies.** Calcutta.

3. Grover, Usha. **Corporate social reporting in India.** Delhi.

4. Jain, Amar Chand. **Madhya Pradesh mein jila udyog kendron ka adhyayan: Sagar Sambhag ke vishesh sandarbh mein.** HS Gour. Dr J K Jain, Department of Commerce, Dr Hari Singh Gour Vishwavidyalaya, Sagar.

5. Jain, Pavan Kumar. **Madhya Pradesh mein Rajya Sehkari Bank ka vittiya prabandh: Ek adhyayan.** HS Gour. Dr B K Jain, Department of Commerce, Dr Hari Singh Gour Vishwavidyalaya, Sagar.

6. Mohammad Sajid. **Export poteniallties of Brassware industries of U P.** AMU. Prof Samiuddin, Department of Commerce, Aligarh Muslim University, Aligarh.

7. Sarmah, Bibekananda. **Impact of bank nationalisation in Assam.** Gauhati. Dr D Bharali, Head, Department of Commerce, Gauhati University, Guwahati.

8. Sharma, Poonam. **A theoretical and empirical investigation of human resource accounting.** Delhi.

9. Shrivastava, Narendra Kumar. **Sagar Jile mein ekikrit grameen vikas karyakram ke antragat labhanvit hitgrahiyon ka arthik sarvekshan.** HS Gour. Dr R K Bharti, Head, Department of Commerce, Dr Hari Singh Gour Vishwavidyalaya, Sagar.

Management

1. Abraham, V L. **Industrial sickness: A study of the reasons and causes for industrial sickness among the small scale industries in Kerala.** CUST. Dr N Chandrasekharan Pillai, Prof, School of Management Studies, Cochin University of Science and Technology, Kochi.

2. Khanduri, Mukul. **Allocation of oil resources for optimum growth of the Indian economy: A sectoral analysis.** Roorkee.

3. Krishna Reddy, B. **Analysis and modelling of coal mining systems.** Osmania.

4. Narayana Murty, Oruganti. **Employee welfare in public sector: A study of selected units in Visakhapatnam.** Andhra.

EDUCATION NEWS INDEX

A list of select articles and editorials on education from newspapers received in the AIU Library during November 1992

EDUCATIONAL PSYCHOLOGY

Mulchandani, Sandhya. Not just school mates. **The Times of India** 14.11.92.

Patil, Ravindra V. Motivation, rewards and goals in life. **The Hindu** 3.11.92.

EDUCATIONAL SOCIOLOGY

ACCEPTING THE verdict (Editorial). **The Hindu** 26.11.92.

Agarwal, U C. Reservation: A rational approach. **The Hindustan Times** 9.11.92.

Ahmed, Firoz Bakht. Not by Urdu varsity. **The Hindustan Times** 19.11.92.

Ajaz Ashraf. And justice for all?: Or, how to be the cream without being in the creamy layer. **The Pioneer** 22.11.92.

________ . and others. Lessons for New Delhi. **The Pioneer** 29.11.92.

Akbar, M J. When the cream turns sour? **The Telegraph** 22.11.92.

Amrik Singh. Educational fall-out of Mandal verdict. **The Times of India** 24.11.92.

Anantha Murthy, U R. National Akademies: Role in promoting excellence. **The Times of India** 16.11.92.

Ashok Rao, K. 27 percent of zero is zero. **Indian Express** 24.11.92.

BACK TO reservations (Editorial). **The Tribune** 18.11.92.

BACkWARD AND forward (Editorial). **The Hindustan Times** 17.11.92.

Badrul Islam. Muslim education. **Patriot** 4.11.92.

Bal Krishna. SC verdict final word on job quota. **The Hindustan Times.** 23.11.92.

BEYOND MANDAL (Editorial). **The Economic Times** 17.11.92.

Bose, Ajoy. Caste-based reservations are a fraud on the nation. **The Pioneer** 20.11.92.Chopra, Pran. Misusing reservations. **The Hindu** 27.11.92.

FUTURE SHOCK (Editorial). **The Telegraph** 18.11.92.

Gill, S S. Mandal: Issues ignored. **The Hindustan Times** 23.11.92.

Gupta, Kanchan. Time to call the bluff of anti-Mandalites. **The Pioneer** 19.11.92.

HISTORIC JUDGMENT (Editorial). **The Assam Tribune** 18.11.92.

IN BAD faith (Editorial). **The Telegraph** 26.11.92.

INJUDICIOUS VERDICT (Editorial). **The Tribune** 24.11.92.

INSTRUMENT OF social justice (Editorial). **The Pioneer** 18.11.92.

INSULT TO Ambedkar (Editorial). **The Tribune** 21.11.92.

Jha, Prem Shankar. Is job reservation the answer? **The Hindu** 4.11.92.

__________. Mandal and the media blitzkrrieg. **Indian Express** 22.11.92.

JUDGMENT AND after (Editorial). **The Assam Tribune** 24.11.92.

Kamath, M V. Reservations and all that. **Free Press Journal** 26.11.92.

Khare, Harish. Mandal leeway: Imperfect policy, perfect politics. **The Times of India** 20.11.92.

LANDMARK JUDGMENT (Editorial). **The Hindu** 18.11.92

MISTIMED CELEBRATION (Editorial). **Patriot** 18.11.92.

Mitra, Chandan. Mandal is dead; long live Mandal. **The Hindustan Times** 23.11.92.

MORE ON job quotas (Editorial). **Patriot** 19.11.92.

Namboodiri, A V S. Mandal case judgment: Fresh problems to the fore. **Deccan Herald** 30.11.92.

Nayar, Kuldip. Reservations will divide the society further. **The Pioneer** 28.11.92.

Palkhivala, Nani A. Mandal perpetuates casteism. **The Hindustan Times** 30.11.92.

Ray, Amal. Political constraints on judicial intervention: Reservation for social justice. **Deccan Herald** 27.11.92.

Reddy, G N and Ramakrishna, G. Minority rights in education. **Patriot** 11.11.92.

RESERVE GRADE (Editorial). **The Statesman** 18.11.92.

RIGHT RESPONSE (Editorial). **The Hindustan Times** 19.11.92.

Sahay, S. Reservations' implications. **The Tribune** 30.11.92.

_______. Reservations: Moment of truth. **The Hindustan Times** 26.11.92.

Sethi, Sunil. Life in the time of Mandal. **The Pioneer** 22.11.92.

Shourie, Arun. Mandal imbroglio. **The Pioneer** 29.11.92.

Singh, Tavleen. Jumbled up priorities. **Indian Express** 29.11.92.

Singh, V P. Man who could say, I told you so. **The Pioneer** 29.11.92.

SOCIAL JUSTICE upheld (Editorial). **Indian Express** 18.11.92.

Sorabjee, Soli J. Mandal judgment: Triumph of social justice. **The Times of India** 25.11.92.

Srinivasan, K. Post-Mandal politicking. **Free Press Journal** 22.11.92.

Tarkunde, V M. Mandal case: A judicious verdict. **The Hindustan Times** 28.11.92.

Thakur, Sankarshan. Supreme Court ruling on Mandal: More seeds of conflict. **The Telegraph** 22.11.92.

TWO CHEERS for Mandal (Editorial). **The Times of India** 17.11.92.

Venkatesan, V. Anti-Mandal stir needs refocussing. **The Times of India** 23.11.92.

VERDICT AND after (Editorial).**National Herald** 18.11.92.

VERDICT AND after (Editorial). **The Tribune** 19.11.92

Viswam, S. Mandal: Whose victory? **Deccan Chronicle** 19.11.92.

EDUCATIONAL POLICY & PLANNING

Berstecher, Dieter. Education for all by the year 2000: Is the drive on the right track? **National Herald** 17.11.92.

PRIMARILY, EDUCATION (Editorial). **The Economic Times** 16.11.92.

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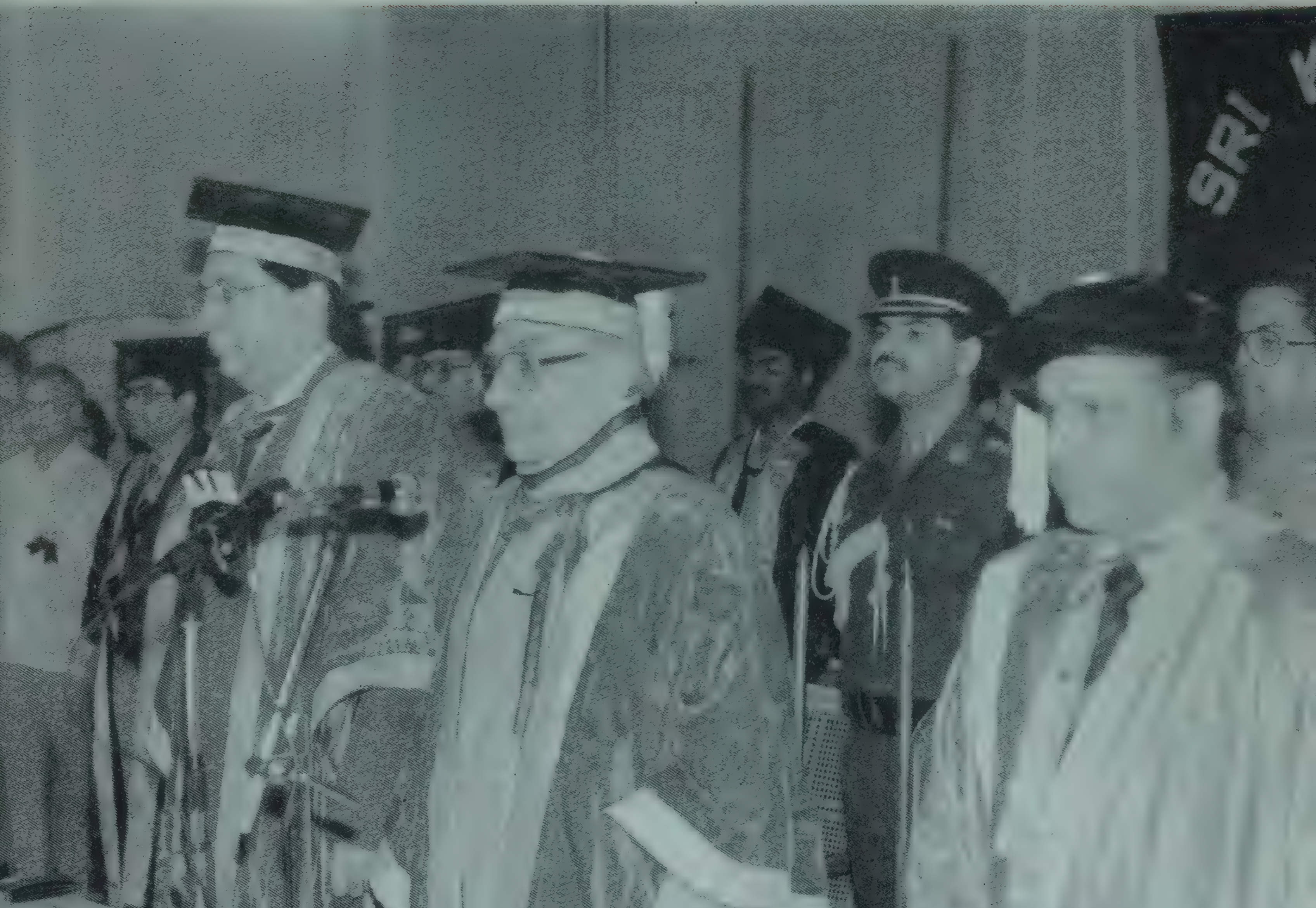

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Editor :
SUTINDER SINGH

Medium of Instruction in Higher Education

N. Venkataiah*

Introduction

What should be the medium of instruction in higher education? The answer to this question has been controversial in this country for the last sixty years. Even today no single opinion is widely accepted. However, an attempt is here made to answer the following questions :

1. Are regional languages adequately developed to be the medium of instruction in higher education? Are the regional languages effective medium of instruction or vehicle of modern knowledge?
2. Is the retention of the English language as medium of instruction in higher education desirable and academically sound proposition?
3. Can Hindi become common medium of education in all universities?

Importance of English in India

It is interesting to recall that English was established as a medium of instruction with the famous Macaulay minutes and gradually it assumed a predominant position in the national style of thinking and living. The English language did contribute to the unification of the country. It provided the country the necessary link between the educated sections of the people from different areas and facilitated the development of an integrated civil administration, a uniform judicial system and a common language of higher education.

i) At the national and international levels English continues to serve as our window on the world and as our link with the outside world. It will continue to be a source language providing access to the vast and growing knowledge in the fields of science, technology, medicine, social sciences, management, law and also humanities. Our scientists, technologists, engineers, doctors, economists and other researchers must be able not only to have access to professional literature in English but also be able to contribute to it and to interact with fellow researchers in the other parts of the world. This has become very important today because English is the main language of transnational communication. The continuation of English is important if our science and technology, trade and commerce are to be truly international.

ii) As an associate official language, as the official link between the central government and the governments of the non- Hindi speaking states, as the language favoured by all-India institutions, all-India seminars, workshops, conferences, the legal and banking systems, trade, commerce, and defence, English has important international functions.

This issue of UNIVERSITY NEWS is dedicated to the All India English Teachers Conference being held on 28-30 December 1992 at Sri Krishnadevaraya University, Anantapur (Andhra Pradesh).

**Professor & Dean, Faculty of Education, University of Mysore, Mysore-570006.*

iii) It is not only an important promoter and social mobility for ordinary people, but also a promoter of geographical mobility. It has been playing an important role in bringing about national unity and integration.

iv) In some states and certain disciplines English continues to be the main or associate medium of instruction and examination at the tertiary level.

v) Where the medium of instruction is some language other than English, the students and researchers find English useful as a 'library language' and 'language of wider communication,.

vi) English continues to be 'the language of opportunity', 'the language of development', and 'the language of upward socio-economic mobility'. Any individual seeking socio-economic advancement at the national level will find ability in English an asset. Jobs that require inter-state movements demand a fairly high level of competence in general and technical English.

Educational Leaders/Commissions on Medium of Instruction : A Historical Perspective

Language of the students, according to Rabindranath Tagore, should be the medium of instruction. He lamented that in no country of the world, except India, was the language of education divorced from the language of the students and that the use of English as the medium of education in universities confined higher knowledge and culture to a select section of the citizens instead of making them universally available to the people.

Similarly, the father of the Nation, Mahatma Gandhi strongly objected for the continuation of English as the medium of instruction. In his words "The medium of instruction should be altered at once and at any cost, the provincial languages being given their rightful place. I would prefer temporary chaos in higher education to the criminal waste that is daily accumulating".

The third (1934) and the fourth (1939) quinquennial conferences of Indian universities adopted a resolution that the medium of instruction and examination at different stages of education upto and including the degree courses should, as far as circumstances permit, be the mother tongue.

Amarnath Jha, a reputed educationist, felt that English as medium of instruction had hindered the advancement of knowledge in the Indian universities. His opinion could be observed in his words. "If the Indian universities have not contributed more materially to the advancement of knowledge, to a large extent the responsibility for that must be traced to the circumstances, that education is imparted through an exceedingly difficult foreign language".

The University Education Commission recorded that the problem of medium of instruction had caused great controversy among educationists and contradictory views were expressed by their witnesses. The Commission also felt that this question was so wrapped up in sentiment that it was difficult to consider it in a calm and detached manner. In the opinion of the Commission, "Higher education be imparted through the instrumentality of the regional language with the option to use the federal language as the medium of instruction either for some subjects or for all subjects."

While supporting University Education Commission's view the National Integration Council (June 1962) observed that the change in the medium of instruction from English to regional language was justified not so much by cultural or political sentiments, as on the very important academic consideration of facilitating grasp and understanding of the subject matter. Further, India's university men would be unable to make their maximum possible contribution to the advancement of learning generally, and science and technology in particular, unless there was a continuous means of communication in the shape of the regional languages between its masses, its artisans and technicians and its university men. The development of talent in the country would also in the view of Council, be retarded unless the regional languages were employed as media of instruction at the university stage. The Committee on Emotional Integration (1962) endorsed these recommendations and observed that they were not unaware of the political difficulties involved in the switch over to regional languages at the university level. Safeguards have to be devised to prevent the lowering of standards. The change over must be preceded by preparation of textbooks and arrangements for translation from English, and wherever possible, other modern world languages. In order to maintain inter-university and inter-state communication, special attention must be paid to the teaching of the link language – English and Hindi – when the change over to the regional languages was accomplished. The Committee, however, liked to point out that in the name of safeguards, the switch over should not be delayed indefinitely. The Vice-Chancellors' Conference (1962), almost endorsed the recommendations of the National Integration Council and the Emotional Integration Committee.

The Education Commission Report (1964-66), too, reiterated the earlier recommendations and added: we suggested that the UGC and the universities carefully work out a feasible programme suitable for each university or a group of universities. The change over should take place as early as possible, in any case within about ten years. What is required is to formulate a clear policy, to express it in unambiguous terms and to follow it up with firm, bold and imaginative action."

This proposal was appreciated and accepted by The Tenth Conference of State Education Ministers (April 1967) and by the Committee of Members of Parliament on Education in 1967. In July 1967 the Education Minister, Dr. Triguna Sen made an official statement in the Lok Sabha outlining the policy regarding the medium of education based mainly on the recommendations of the National Integration Council. The Government of India accepted in principle that Indian languages should be adopted as media of education at all stages and in all subjects including agriculture, engineering, law, medicine and technology. This would result in releasing the creative energies of the people, improving the standards of education, expansion of knowledge and bridging the gap between the intelligentia and the masses.

While addressing the Vice-Chancellors' Conference in New Delhi on September 11, 1967, Dr. Triguna Sen admitted "Whether we like it or not the option is obvious, and we must willingly accept the adoption of the regional languages as media of education at the university stage." Thereupon a heated controversy was sparked off throughout the country, especially with regard to the regional languages being the media of education in the universities and other institutions of higher education. The language policy generated an unprecedented debate and controversy and convulsed the entire nation into a violent mood. Many professional organisations passed resolutions against this policy. The major thrust of the criticism was directed against the introduction of regional languages because that would open up the prospect of a rapid growth of regional loyalties and a decline in inter-regional fellow feelings. This would spell disaster in the educational standards and in the process lead to the emergence of regressive trends in the country. The Union Cabinet Minister Mr. M.C. Chagla foresaw in it the seeds of fragmentation of the country and resigned from the cabinet saying "Educational policy of the Government is likely to threaten, if not undermine, the unity of India".

Present Position

As regards the medium of instruction at different level, number of changes have taken place in the country during the last three decades. As on today, the medium of instruction in almost all the states at the primary and secondary schools and undergraduate colleges, in general, is regional language. There are some postgraduate courses with regional language as medium of instruction in some universities. English continues to be the medium of instruction in some schools at the primary and secondary level, some of the graduate colleges or some sections in the first grade colleges and in most of the postgraduate departments of the universities. In the professional colleges – Engineering, Medical and Law, both at the graduate and postgraduate levels only English is the medium of education throughout the country. As far as the language subjects are concerned, the researchers can produce their theses in the regional language in all the universities. Some universities have already allowed the scholars to produce their theses in Arts/Humanities in the regional language.

A Critical Look

The standard arguments voiced from time to time in favour of English as the medium of instruction are the quality of education, poverty of regional languages and their inability to handle the demands of the role of a medium of instruction, paucity of books in the regional languages, the impossible task of large scale translation and the content and mobility of scholars. True, some of these arguments have merit, but they have to be adjudged from the broader perspective.

The major allegation against the continuance of English comes from those who reflect their inability and unwillingness to go through the rigorous discipline of mastering the English language. Since it has its associations with an alien culture, it is adversely affecting the development of the national style of living and thinking. English language has widened the gulf between the intelligentia and the masses. If the democratic forces have to function in any meaningful manner, the communication gap must be bridged.

Medium of Instruction in Higher Education

1. *Poverty of Regional Languages is a Wrong Notion*

Though English performs a set of very important communicative functions in our multilingual setting, this should not make us feel that the Indian regional languages are meant for a secondary role and cannot function effectively as vehicles of scientific and technological knowledge. We are of the view that no language is inherently incapable of conveying any ideas – be they sublime or mundane, metaphysical or technological. All languages have the potential for being developed for all the purposes that the human society and the human brain can conceive. As a free nation, we are committed to the modernisation of Indian languages so that they may serve most of those functions for which we now use English. In order to do this we should use English as a 'source' language.

2. *Regional Languages should be the Medium of Instruction at All Levels*

Learning through a foreign medium compels the students to concentrate on cramming instead of mastering the subject matter. Moreover, as a matter of sound educational policy, the medium of education in schools and higher education should generally be the same.

With the regionalisation of the medium of instruction at the secondary level a fairly large number of students joining the first year of the undergraduate programme have either no English or little English or frozen English which they do not know how to use. In many of the colleges in almost all the states, regional language is the medium of instruction and most of the students complete their undergraduation in regional languages. Therefore, it is logical and reasonable that such students should be given education at the postgraduate level only in the regional language. For them the instruction as well as the medium in which they have to write the examination will be only regional language. For such of the students who have studied in English medium at the secondary or graduate levels, instruction at the P.G. Level may be provided in English, if possible. If it is impossible, mixed instruction both in regional language and English may be provided to them. They can be allowed to write examinations either in English or in regional language. For such of those students who do not have any knowledge of regional language, special classes may be taken till they acquire functional knowledge in regional language.

3. *Regional Language Medium does not lower the Standards*

It is unfortunate that the decline in the educational standards started with the negligence of the English language in higher education. It is only a coincidence. The proposition that with the adoption of the regional language as a medium of instruction there will be an automatic improvement in the quality of education is also doubtful. Our experience reveals that it is the refusal of the students to work hard and to keep themselves abreast with the latest developments that are responsible for the decline of standards but not the medium of instruction. Don't we come across students of low standard in the English medium classes?

4. *Hindi as a Common Medium of Education is not possible in all Parts of India*

It has been argued that there should be a single medium of education at the university stage – English for the time being, to be ultimately replaced by Hindi – on the ground that it would promote mobility of teachers and students from one part of the country to another, provide for easy communication between academic and professional men and administrators, further intellectual cooperation among the universities and help in other ways in developing a corporate intellectual life in the country.

The adoption of Hindi as a common medium of education may be possible in North India but it is not possible in South India.

5. *English should be the Medium of Education in All India Institutions*

All India institutions and central universities which admit, in considerable numbers, students from different parts of the country should have English as the medium of education.

6. *Learning of English is Necessary*

The introduction of regional language as medium of education should not be interpreted to mean underrating the importance of English in the university. For a successful completion of the first degree course, a student should possess an adequate command over English, be able to express himself in it with reasonable ease and facility. Therefore, adequate emphasis will have to be laid on its study as a language right from the school stage. English as an important library language would play a vital role in higher education. No student should be considered as qualified for a degree in particular, a Master's degree unless he has acquired a reasonable proficiency in English.

The Implications of Changing Over to Regional Language as Medium

(1) All teachers in higher education should be essentially bilingual in the sense that they should be able to teach in the regional language and in English.

(2) All students (particularly postgraduate students) should be able to follow lectures and use reading material in the regional language as well as in English.

(3) Special units for teaching English should be established in universities and colleges whose main objective would be to give good working knowledge of English to new entrants by the adoption of modern teaching techniques and in as short a time as possible.

Precautions to be taken by the State Governments to Introduce Regional Language as Medium of Instruction in Higher Education

An expert committee consisting of academicians and administrators has to be constituted at the state level to make a status survey of the regional language on the aspects given below and advise the state government on the feasibility of introducing the regional language as medium of instruction in higher education :

(1) Translation of good number of textbooks into regional language by academies or *Parishads*,

(2) Writing original textbooks in different subjects in the regional language,

(3) Preparation of glossaries/common terminologies in the subjects concerned,

(4) Starting research journals/periodicals in different subjects in regional language,

(5) Conducting workshops in teaching the subjects in regional language,

(6) Preparation of relevant literature including reference books in regional language in different subjects, and

(7) Distribution of work among Universities/Academies/ Parishads/ Individuals/Institutes, etc.

References

1. Bhandarkar, S.S. **Association of Indian Universities.** New Delhi: Association of Indian Universities, 1985.
2. Gandhi, Kishore. **Issues and Choices in Higher Education.** Delhi: B.R. Publishing Corporation, 1977.
3. Gaudino, Robert L. **The Indian University.** Bombay : Popular Prakashan, 1965.
4. Kapur, J.N. "Technical Hindi and Educational System", **University News**, Vol. XXIV, No. 34, September 8, 1986, 1-2 & 7.
5. Shah, A.B. (Ed.). **Higher Education in India.** Bombay : Lalvani Publishing House, 1967.
6. Verma, Sivendra, K. "English in India: Problems and Prospects", **University News**, Vol XXVII, No. 9, February 27, 1989, pp.1-3.
7. Verma, Shivendra, K. "My Mother Tongue is not My Mother's Tongue", **University News**, Vol. XXVIII, No. 51, December 17, 1990, pp. 1-6.
8. Vernal, Louis. "Language Policy and the Learning of English", **Journal of Indian Education**, Vol. 15, No. 2, July 1989, pp. 38-43.

What is Wrong with the ELT ?

Anil Paliwal*

It is all too tempting not to think about the way English is being taught in India. In fact, no good teacher of English seems to be content with the way English is being taught at various levels in our country. This discontentment has grown deeper over the years owing to our intentional negligence of the real objectives of the second language teaching. We as teachers have, perhaps, not been able to understand discernible difference between the teaching of the first language and the second language. We have unknowingly taught English as a foreign language or as a supplementary language, or I might just as well say that we have taught it like our mother tongue. We have also closed our eyes to the fact that we are teaching English after students' mother tongue. These things compel a pedagogue to ask the following apprehensive questions :

What does a teacher teach? Does he teach a content-subject or a skill-subject? Does language come under psycho-motor domain or cognitive domain ? Which languages does he teach ? Is it the mother tongue or a second language or a foreign language ? Does he know the fact that language teaching strategy differs from language to language? Is he capable of doing the job successfully ? How does he teach the language ? What does he teach with ? Who is he teaching to ? What is the learning level of his learners ? What, how, where, when and to what extent does he test ? Does he distinguish between colloquial and standard language ?

These are some of the puzzling questions which would give answer to the cardinal question "What is wrong with the ELT ?" Let us try to make an attempt to find answers to these questions which could be put into two broad categories : (A) How is the education system ? (B) How are the learners and the teachers of English?

(A) The Existing Education System

It has been accepted by almost one and all that there is no uniformity of standards in teaching and learning of English in our country. Different States follow different policies. The problem is not lack of ideas but lack of action. Things do not move fast. Other considerations mainly political in character intervene to block progress in such a vital area as language, consequently a large number of English coaching centres which earn a lot of money in the name of teaching English have been opened in the markets. Students are tempted to buy cheap bazar notes and guide books which claim to teach them English within 30 to 60 days. Then there are teachers who teach very little in schools and more at home and give tuition making teaching of English a business. Whether one knows or not the pedagogy of language teaching, it is becoming an important art of money making. Such psudo-language teachers impact a large number of rules in the mind of young learners. When we come across the real learning outcome, we are shocked to know that these learners have learnt nothing but a few stereotype expressions. The whole labour which they have put in seems to have gone waste due to converting teaching learning into business which ultimately is counter-productive.

(B) Learners, Teachers and ELT

Most of the teachers fail to see the truth that learning and teaching a language are two different things. Language learning is a time consuming process and one needs to have a lot of patience as well as hard work. Each language is unique in its nature and has its own peculiar structure and system. Hence teaching of English cannot be equated with teaching of Hindi which has a different structure and system. Teachers often teach English as a content subject, not as a skill-subject. There lies the biggest problem of teaching and learning English. Language is a skill, not a content subject. Skills and content subjects differ in nature and approach. One can never substitute one for the other.

Our school teachers tend to teach too many things at a time i.e., lexis, structure, composition, translation, etc. Their teaching seems divergent, not specific. Teachers are often general rather than specific in the classroom. Learners' actual learning needs are not spelt out. Learners' learning level, abilities, proficiency, age and aptitude are not taken care of.

I wonder if our teachers are really acquainted with the latest language teaching approach. Most of the teachers are still walking in the old shoes. They stick to the traditional methods without caring for the new ones. They are teaching about the language, not the language itself – only a few teachers have proper ideas about linguistics, para-linguistics, phonetics, phonology, sociolinguists, lexicography, semantics, psycholinguistics, applied-linguistics, language pedagogy and teaching methodology, etc. For most of them transformational generative grammar, behaviourist and cognitive approaches, contrastive analysis, language acquisition and language learning, communicative approach to language teaching have no meaning.

Teachers tend to stress written language and thus neglect spoken language. The hierarchy of skills that are listening, speaking, reading and writing is not followed

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properly. Teachers tend to begin from the end and go only half way and stop thereafter.

Rules are imposed on the learners who are not allowed to explore the language. Learning errors are not corrected. Learners are, generally speaking, not motivated and activated. Translation method is the only method teachers are acquainted with. Translation method has its own limitations and can just help but cannot do the whole job. What is surprising is the fact that teachers tend to put more emphasis on the content than the teaching of language. Vocabulary is a neglected item and has often been given a secondary place.

The Remedy

My objective in this article is not to accuse anyone but to put forward my observations and experiences as a teacher as well as a teacher-trainer.

i) Need of Patience

It is rightly said that prevention is better than cure. Let us prevent the ills which have crept into the system. First of all, teachers should drive this point to their learners that in order to learn English, they must have a lot of patience. Learners must be motivated to learn on their own. Let them explore the language.

ii) Appropriate Methodology and Pedagogy

On the one hand, teachers ought to understand the language teaching methodology, on the other, they should use the right and appropriate method and techniques keeping in mind the teaching and learning situations in the classroom. They should teach English as a skill and all the four fundamental language skills should be developed in the learners. Let the learners imitate good examples and try to form their own learning strategy and habits.

iii) Suitable Testing Strategies

Teachers' testing strategies must also be in accordance with their teaching procedures and test items must aim at testing the language items which have been taught. The difference between linguistic performance and communicative competence needs to be clarified to the teachers.

The process of evaluation in language teaching should be closely related to objectives. Learners' language skills should be tested in order to establish what he knows or what he can do.

iv) Translation should be Discouraged

So far as teaching is concerned, translation should be used as little as possible. Its use should be minimum and judicious. Teachers need to discourage the use of prescriptive grammar and should stress learning sentences and not words, at the beginning. It is, perhaps, not correct to think that writing is more important than speaking.

Teaching of English should not be done until we have clear cut objectives in our mind. We should know where we want to go.

Importance of Functional View

Out of the three different theoretical views of language which are structural view, functional view and interactional view, teachers must select the most appropriate one. In western countries the functional view has picked up momentum. The functional view is that language is a vehicle for the expression of functional meaning. The communicative movement in language teaching subscribes to this view of language.

No Need to Separate Language

Written and spoken English need not be reckoned as separate language activities as they are often considered to be; one is a formula with very fixed conventions, the other a game where every player makes up his own rules.

Conclusion

Teaching and learning go hand in hand and should not be isolated because they are integrated. It is time now to make English language teaching pragmatic and realistic. A lot of water has flown under the bridge. We should not commit mistakes like the mother throwing the child with the tub-water. Let not the future become dull and monotonous but bright. Let us summon up our courage and get down to the real task before us, the task of improving teaching learning English.

References

1. Brumfit, C., (1984) **Communicative methodology in language Teaching**. C.U.P.
2. Finnocchiaro, Marg (1964). **English as a Second Language. From Theory T.Practice.** New York : Regents.
3. Harris, David P. (1969) : **Testing English As A Second Language.** New York. McGraw Hill.
4. Littleword, T. (1984). **Foreign and Second Language Learning.** C.U.P.
5. Lado, Robert : (1971). **Language Teaching,** TMH, Ed. New Delhi.
6. Mackey, W.F. : (1965). **Language Teaching Analysis,** London Longman.
7. Richards, Jack & Rodgers, T.1986 . Approaches and methods in language Teaching, C.U.P.
8. Rivers, Wilga M. (1968). **Teaching Foreign Language Skills.** Chicago, Chicago University Press.
9. Widdowson, H.G. (1978). **Teaching Language as Communication.** C.U.P.
10. Wilkins, D.A. (1983). **Linguistics in Language Teaching.** London. ELBS & Edward Arnold.

Innovation and Improvisation in Language Teaching

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Over the years teachers of English and learners have gone on in their course of teaching and learning in an awfully fixed manner despite several commendable attempts at reforming the system. In college after college we come across teachers susbstituting expediency in the place of developing skills and students making rote learning more effective than intuition. The whole process seems to settle down into the ruts from which the cart cannot move out until the next turn on the country road. This is the kind of weird allegiance against which there is a need to resist.

To get out of the ruts it is imperative that we have more turns and breaks on the way. Recently a visit to some classes of English revealed interesting things. When asked where did they come from, the students gave a stock response. They said that they came from the town where the school was. After a number of them had given the same answer the supervisor looked at the visitor and the class teacher and then tried to elicit more individualised responses indicating the area of the town where they came from. They failed and the chorus went on. This was duplicated in the other classes of the junior college. Their performance was an eloquent example of the rote learning that is now taking place. The teacher could have removed this stereotype learning by frequent variation of the phrasal structure. It was within his means. An analysis of the linguistic behaviour reveals that our students have not come to grips with the phrasal structure, particularly of adverbs. The teacher could very well show by repeated practice with variation the underlying pattern: "I am from camp, in." "I come from the old ... Road, ..." This is not beyond the means of the teachers. A realisation of what he has would surely help him to stay in the profession with some satisfaction.

The greatest help in improvisation comes from the first language (L1) of the teacher of the second language (L2)(English). Being a speaker of his native tongue and teaching students who share his L1 he should engage himself in a self analysis and in, what a recent seminar in Goa University called on teachers to undertake, self renewal. He knows for sure that a Marathi speaking learner would say "My father went in market" rather than "My father went to market." Aware of the differential preposition in Marathi and English the teacher goes ahead with the correction and then reinforcement of the correct usage. By making himself intensely aware he can go further and think out new ways of improving himself and his teaching.

From the foreging illustration it should not be inferred that innovation and improvisation are synonyms of remedial teaching. They are pontentials of ability which the teacher has to realise in himself and work with. Self renewal can come about and teaching can be strengthened and made more useful. In most grammar books the table of twelve tenses is given. In some colleges the table is also written on the walls. This display of the basic tens pattern of sentence is good for the eye of the weather beaten education officer or a visiting dignitary. But does the teacher even bother to inculcate them while teaching units of past, present and future tenses? Will it be too much to ask the teacher to repeat them orally from time to time? It is not really convincing to allude to the time-limit on the teacher to shoot down any such suggestion.

Innovation and improvisation are not techniques of the bilingual method. A teacher who takes out a few coins from his pocket and holds them out before the class to show what 'change' means is relying on his potentials of ability. This preparednss to demonstrate in what is in himself and his surrounding that the teacher reaches out to the learners. It grows in him a sense of self reliance. Education is and should be coalition of university and industry. But with the teacher not involving himself in a thought process neither industry is possible nor university relevant. Industry means more than factories, it is the fruitful use of the valuable time by the teacher.

The teacher's industry encompasses his study of the second language in relation to his first language, his mother tongue. It is said that the substraction of the characteristics of the first language from the second leaves behind those characteristics which cause difficulty to the learner. The language teacher's potentials of ability are innate. He has to apply his mind and teach the class. Some Marathi speakers have bilabial plosive /ph/ but they don't have the labiodental fricative /f/. This causes a difficulty. The teacher can overcome his shyness, if he has any, and make a demonstration with his organs of speech and show the difference. This would help the learner much better than just writing the phonetic symbols on the blackboard and dictating notes.

(Contd. on page 17)

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Anachronistic Syllabi and Pedagogic Strategies in English Literature
Wanted Need-based Approach

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In a period of more than four decades enough has already been said and written about designing, redesigning and restructuring of English literature courses including pedagogic strategies to be adopted at the undergraduate and postgraduate levels and also about the whole spectrum of imbalances, disparities and blemishes that exist still today. As an outcome of all this, three things have evidently been witnessed happening simultaneously since then. First, University Grants Commission (UGC), Ministry of Education (presently MHRD) and state governments have been busy appointing commissions, committees, study groups, deliberative specialist bodies (opinion makers at the planners' level) and organising seminars and workshops on how to improve pedagogic strategies and on other policy matters connected with it. Ample literature containing their recommendations and suggestions for the promotion of the standard of excellence have been published at high costs. But it is sad that most of these schemes and suggestions still remain on paper. Secondly, no definite and concrete steps have yet been taken to implement most of the above recommendations because of the inadvertent attitudes/policies adopted by the state governments and bureaucratic set up of various universities showing their utter inability to do so under one or the other simulations. Thirdly, scathing attacks or diatribes made on the above two by academics, educational thinkers, teachers, students and public at large have gone unheeded.

It is an ascertained and confirmed truth – every academician has to agree – that even after 3 to 5 years of studying English literature, a majority of the students fail to develop the desired literary competence and even more the skills of language proficiency to be able to communicate effectively in the simplest real life situations. In this connection National Policy on Education (NPE) 1986 has emphatically remarked, "A preponderant majority come of the institutions of higher education, perhaps with more of the book learning and degrees but with very little capacity for self study, poor language and communication skills.." and further, ".....consequently degrees and grades do not generally command credibility as a whole with the public as well as employers in the private sectors and the whole process of higher education has become warped, disoriented and dysfunctional producing a large number of unemployable young men and women." Naturally the question arises : What are the possible causes for all this? Who are to be blamed – the curriculum/syllabi designers, policy makers, teachers or students? A close analysis of some of the syllabus contents in English literature designed for the undergraduate and postgraduate students and the teaching learning strategies adopted will expose how the whole thing works.

Given below are the course contents intended for the First Year B.A.; Third Year B.A. and M.A. (I) taken from different universities for the purpose of a close analysis :

University 'A'

First Year B.A. English (Major)

Paper I Poetry: From Chaucer to the Metaphysical Poets	100 Marks
A. Scheme of Examination	
(a) History of Poetry	30 Marks
(b) Textbooks Prescribed	70 Marks
i) Chaucer 'The General Prologue' Canterbury Tales	
ii) David Green (Ed) 'The Winged World' (A list of selected Poems given)	
B. Books recommended for basic reference.	
Paper II Renaissance Drama	100 Marks
A. Scheme of Examination	
(a) The History of English Drama	30 Marks
(b) Text Books Prescribed	70 Marks
i) Marlowe : Dr. Faustus	
ii) Shakespeare : Hamlet	
iii) Ben Jonson : Volpone	
iv) Webster : The White Devil	
B. Books Recommended for basic reference	

University 'B'

Third Year B.A. English (Special)

Paper VI - Shakespeare : Two Plays prescribed for detailed Study	70 Marks

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Paper VII – History of English Literature from 1550 to 1700 70 Marks

a) Two Textbooks prescribed for detailed study.

b) A list of 24 books given for acquaintance.

c) Books recommended for reference.

Paper VIII- History of English Literature from 1701 to 1830. 70 Marks

a) Two textbooks prescribed for detailed study.

b) A list of 33 books given for acquaintance.

c) Books recommended or reference.

Paper IX – Literary Criticism 70 Marks

a) Selected topics given for detailed study.

b) Books recommended for reference.

Paper X – Chaucer and History of English Language. 70 Marks
Two textbooks prescribed for detailed study.

Paper XI – Essay and Spoken English 70 Marks

a) 10 Essay Topics on Social and Literary subjects given. 35 Marks

b) Simple Elements of Phonetics 25 Marks

c) Oral Test 10 Marks

University 'C'

M.A. I- English (Entire)

Paper I – Shakespeare : 5 Plays prescribed for detailed study. 100 Marks
Paper II – Modern English Language 100 Marks

Grammar – Phonetics and Phonology.

Paper III – Growth and Development of the English Novel and Prose from the Beginning up to 1960. 100 Marks
Six Text books prescribed for detailed study.

Paper IV – Chaucer and other Middle English Poets. 100 Marks

a) Chaucer 'The Knight's Tale'

b) Sisam : Fourteenth Century Verse and Prose (OUP)

OR

Indo-English Literature
Six Textbooks prescribed.

OR

Classics in translation
Six Textbooks prescribed.

Inherent Blemishes

The above syllabus design for each stage clearly indicates that it is not more than a description of the examination papers to be taken at each year; a list of books prescribed for detailed and non-detailed study; books recommended for reference and total marks allotted for each paper. It is evident that in designing, particularly, the First Year degree course (e.g. university 'A') no serious attempt has been made to estimate whether the new college entrants are linguistically sufficiently well equipped to pursue such a study at this stage. Little thought has been given to correlate the language attainment level achieved earlier (at the H.S.C. level) with those of the new skills to be developed and the new areas to be covered in literature. There is no mention of the systematic courses in reading (literature comprehension, writing (tasks) and speaking (oral communication) – one of the most indispensable areas in all the literature teaching. Obviously, the whole planning, has been reduced to mere bureaucratic rituals. It is far remote from the sound workable system and, therefore, suffers from the following inherent blemishes:

A. *Lack of Direction*

There are no indications of precisely stated set of learning objectives and no clear specifications of minimum standard of achievement required of the learners at the end of each course, which in fact, are the first essential steps in the direction of a sound course design. The specific and definite set of goals in terms of skills to be developed in the areas of knowledge, application and communication relating to further academic needs and future career are not explicitly defined or explained. Consequently, some of the dislike for the literature study is due to the constant disorientation of the students and vagueness of the courses and also constant repetition of the same elements of courses at various stages. The hostility of students towards it is also due to a desire to avoid any course of study that is rigorous, steady, cumulative, stereotype, archaic and useless for their practical needs; a still greater part is a result of the confusion in aims/objectives and the inefficiency of instruction. If teaching of literature is not made a part of students' discovery of the world about them - present and future – it would be more useful for them to study science, economic and commerce than to study literature.

B. *Absence of Instructional Strategy*

1. The specific plan of the instructional strategy to be adopted by the teachers is almost entirely missing. In its absence they helplessly tend to follow the traditional lecture method for each type of teaching material i.e. prose, poetry, drama, criticism, etc. They generally go on explaining the contents of the textbooks in simple

English through lecture/discussion method in the class or dictating notes keeping in view the type of sample questions generally asked in the previous examinations. This anti-result oriented unscientific method defeats the prime objectives of teaching literature and limits students' active participation in learning activities and, in turn, encourages bookish knowledge. The desired literary sensibility and competence and the understanding of the specific use of language in literature remain entirely undeveloped.

2. Learning, in a real sense, takes place meaningfully only when there is a real interaction between the teacher and the taught because learning is an active process – a two way system – but the teachers as well as the most responsible men consider such a teaching – at the college level – a bit elementary and drudgery. It is seldom considered that those adults who join college need entirely varied study styles – college learning study methods – because of their upward age-shift and their particular academic interests and attitudes. After delivering lectures, it is generally assumed that the learners have grasped the techniques of how to glean ideas from the textbooks or have developed the desired reading comprehension and writing ability (note taking). Under this false assumption, the classics are put before them but given no explicit instruction how meaning is to be extracted from it. Consequently, they fail to sharpen their power of visualisation of connotation, form, meaning, idiomatic turns, afflictions of human, irony, etc. which are very obvious to any genuine student of literature.

3. The introduction of modern electronics and technological aids have not yet made an impact on the system to meet the new demands. It seems the planners are unwilling, perhaps, unable to accommodate themselves to the active eager learners of today whose knowledge of the world of TVs, INSAT programmes, computers, films, tape recorders, mechanism and transportation, etc is far better than what it was 15 years ago. No initial attempts have been made to liberate thought and clarify thinking by providing a flexible, responsive medium for its expression. The whole process of existing teaching strategy results in a parrot like reproduction of the textbooks contents with form instead of thought with glibness instead of sincerity.

C. *Unauthentic Assumptions*

A majority of college entrants today (except students from English medium schools/English speaking families and in exceptional cases) are unprepared to cope with the material of the average first year college syllabus in English literature. The reason is obvious : they do not possess the expected necessary language competence to be able to grasp literary sensibility. In fact, they have not been taught – at the school level – how to study, consult dictionaries, make notes from the reference material because they were never inclined to do anywork which might require them to consult books other than their prescribed textbooks. What they encountered, were their course textbooks, teacher's readymade notes, 'sure suggestions' or cheap guides. Surprisingly, as against all this, the university 'A' has prescribed the courses, as cited above, which demand a considerable amount of literary study. Moreover, they contain numerous items of archaic vocabulary, archaic structures and ideas beyond their understanding at this stage. Let's do some soul searching : Are they able to give proper justice to the Chaucerian English or to the plays prescribed? Are they linguistically competent to read and comprehend such texts independently? Do they have necessary literary experience to make anything out of such a difficult text material? These unauthentic (non-research based) assumptions that they do know it all, certainly makes the teaching of literature rather unrealistic and the learners do nothing, in most cases but distort their interpretation of the text contents in a haphazard way.

D. *Deep Rooted Tradition of Archaic Courses*

Charless Grants' Observations (August 16, 1798) read, "We proceed then to observe, ...to impart to the Hindoos our language; afterwards through that medium, to make them acquainted with our literary compositions, upon a variety of subjects ..... progressively with the simple elements of our arts, our philosophy and religion.". It is evident from the above that the contents of the existing syllabi, more or less, remain the same as they were more than a century ago when it got a considerable success because the medium of instruction was English and the students had already acquired necessary language competence by the time they joined college as freshmen. The main aim was to make students acquainted with the classics of English literature, thought, culture and philosophy but not to emancipate and enrich their knowledge and experiences suitable to the social and economic development of the individual learners or the country at large.

In most cases, selection of the textbooks is generally made by the most responsible persons in the profession who were educated 20 to 40 years ago and they do not necessarily teach in the classroom (senior members of the board of studies/executive committee/retired persons also). They stand as authority with their unquestioned and inspiring love and reverence for the literature of the past. Their ideology and criterion for selecting the textbooks and designing the whole framework – even in a free democratic society like ours – still operates faithfully based on the same age old anachronistic patterns of colonial models but not on the actual demands of today aimed at promoting students' intellectual, scholastic, emotional, social, national and occupational growth. Original full length plays, poetry, and prose anthologies written by the great masters of the language are prescribed on the assumption that exposure to such masterpieces will unquestionably serve the important objective of teaching literature at every stage. It is also taught by many that the quality of a syllabus depends on the number of textbooks prescribed e.g. the university 'B' has prescribed about 70 books in addition to the books for reference. They do not seem concerned about the fact that the text materials which are not properly selected, graded or prepared with professional awareness fail to serve the desired purpose. While students (in most cases) struggle to comprehend the text, it is expected of them to make or write their critical judgments on it. Rote memory and the reproduction of the crammed material in the examination is the result. Thus, the whole scheme lacks a focal thrust and is far removed from the practical considerations relating even to academic specialization.

Utilitarian Considerations – Need of Language Plus Literature Courses

1. The classics are not for the students a daily diet. After college education they seldom pick up Chaucer, Bacon, Byron or turn to Plato. (The value of the classics – the knowledge and experiences gained from them which have entirely changed human lives and opened new horizons – is unquestionable). English being our second language, the purpose, therefore, must solely be to prepare not students of literature but expert readers, writers and translators with sound grasp of the English language strictly streamlined to cater their immediate academic needs and employment raising expectations, and the courses in literature if appropriately selected and designed would serve as an additional asset to achieve that target. Hence the students should be led to the language which literature uses because the use of language in literature is generally rather different from its use elsewhere. Inadequate language competence risks rote learning and makes the study of literature a drudgery and a fruitless endeavour. Therefore, at the college level, particularly in the first two years, students need grounding in correct expression along with some theoretical knowledge of usage and through more advanced work in language skills.

2. The teaching of English language and literature needs stimulation of fresh thinking to make it sufficiently relevant and effective by modernising, diversifying and reinforcing it for the students' future needs. Students who offer English literature expected to achieve certain intellectual abilities and skills after the completion of the course either for higher education or for future career which will demand these skills and abilities. Therefore, it is necessary that students – at the undergraduate level – should, first of all, specialise in language which should basically include : (I) Advnaced English Grammar and Usage, (II) Translation and a Course in Written English (III) A Course in Phonetics and Spoken English; and (IV) An Introduction to the Study of Language and Literature including Literary Terms, Concepts and Rhetoric – among other courses in literature.

At the postgraduate level there should obviously be no restrictions since the aim is to introduce the whole range of English literature. However, at least three of the following courses :(I) Contemporary English Usage/Communicative Grammar of English, (II) Translation and Advanced Rhetoric, (III) Advanced Course in Phonetics and Structural Linguistics with special reference to English, and (IV) Problems involved in the Teaching of English OR The Principles of Second Language Study – be studied in the span of two years.

Practical Considerations

Inadequate exposure to language makes students' self-expression artificial, stilted and pretentious. Therefore,the skills of intensive and extensive reading with accurate comprehension, Speaking (oral communication), Writing (correct written expression) and Translation are prerequisites for the students of literature. This integrated approach will help them achieve a reasonable degree of language sophistication, acquire excellence in accomplishment to be a self-reliant creative learner and develop a genuine capacity to deal with literature. The following are some of the desirable steps in this integrated approach to English teaching :

Reading Skills

One of the chief objectives of teaching literature is to develop a fairly high level of reading ability which would give the learners pleasure, self-confidence and place them on a self-generative basis so that they can read textbooks, journals, recent trends and research developments independently and extract points of relevance for their specific purpose such as preparing notes, outlines, writing summaries and effective reports/projects, etc. Reading which exploits literary perceptions certainly requires a varied pedagogic approach. Therefore, at the undergraduate level suitable text materials specially written, graded and having a considerable variety – prose, poetry, one act plays and extracts from various sources written by modern authors – are to be introduced with a major aim directed towards securing an interest in and improving students' voluntary reading – because reading is the most autonomous and individualised activity in language work – and leading to self expression both in speaking and writing which is not always done. The Radhakrishnan Commission was sore when it remarked, "..... and in the universities no student should be allowed to take a degree who does not acquire the ability to read with facility and understanding..." Therefore, an integrated motivational - reading-activity-approach should be adopted to inculcate in the students' self-study habits which will enable them to add to their intellectual equipment and skills throughout life.

Writing Skills

The new entrants at the first year college level in English literature need to learn the use of the insightful analysis of higher order skills of writing. Therefore the syllabi should provide models and materials to help the learners to systematically proceed towards maturity and felicity in their writing activities. Unless they learn to elaborate ideals to communicate experiences, viewpoints or messages for producing desired effects, all efforts of literature teaching will prove a futile exercise. Cultivation of effective expression on the part of the students should include : Firstly, the major forms of day-to-day writing – describing, narrating, arguing and reporting for various purposes, letter writing and drafting message which are very much needed in actual print in ordinary life. Secondly, acquiring of information, study skills, note taking, note making, summarising and translation. Thirdly, description of text based episodes, events, themes, character, habits, processes, experiences, styles, etc. The presentation of the above tasks will need a careful pedagogic grading of models and plenty of stimulating exercise materials which may exemplify and a characteristic feature of each form of writing with its richness and variety which would form a solid base to pursue the literature study with ease and confidence.

Translation Skills

According to the new needs and fluid conditions and increasing prevalence of utilitarian motivation, it has become an utmost necessity to produce competence at high academic levels in the skills of translation – in the main – related to the general recognition of the fresh roles assigned to English in our country today. The regionalisation of the medium of instruction has put a pressing force that translation of English into the learner's mother tongue and vice versa should form a part of the undergraduate and postgraduate English language and literature teaching programme. Besides, many competent translators are required in various fields of enterprises both public and private. Therefore, the teaching of translation as a specialised skill – in a 'giant' multilingual country like India – need be recognised and given due place in the syllabi.

Aural-Oral Skills

It is unfortunate that the syllabi do not provide for the systematic teaching nor for the examination of the aural-oral skills. It is overburdened with imaginative literature and the focus is mainly on the academic and reference use of English i.e. the skills with the written language are comparatively better aimed at and developd then those of the skills of spoken language. Consequently, the skills of oral communication are entirely ignored by teachers and students alike. In English there is little correlation between the orthographic symbols and their spoken form. As a result students generally go by the spellings and use the sound just suggested by the spellings. Therefore systematic practice is necessary in learning the overall patterns of stress, rhythm and intonation. How can students read English verse or plays meaningfully if they are not introduced to stress, intonation and rhythm in English. On the other hand, the interview is the commonest form of speaking English, widely used for the selection of candidates for various categories of posts for which the fluent oral communication and intelligibility is the basic criteria. Therefore, it is highly desirable that newly framed syllabi recognises the importance of listening and speaking skills and incorporate these in both teaching and testing, particularly, at the undergraduate level.

Conclusion

1. The curriculum in English literature should identify the overall significant changes to be brought about in learners as a result of a year's instruction. Thus the course of study should be framed in such a way as to provide an explicit set of clearly defined objectives classified as knowledge, skill, disposition and experience with detailed task description and analysis in terms of cognitive and behavioural skills (the course of study being broken down into small units or divided into a series of steps in relation to each task and skill component), the student would require to be able to perform to demonstrate that he has acquired the desired skills. Specifications like these would form the basis of devising the most appropriate evaluation procedures and test formats to get definite evidence of their effectiveness and help diminishing many of the existing examination evils.

2. The course designers should make a conscious selection of appropriate teaching materials taking into account the language competence of the learners; teaching procedures and instructional strategy to be adopted with clearly stated role of students and their active participation in the teaching/learning process in order to accomplish the intended aims.

To sum up, the Aims/Objectives Teaching materials + Teaching Strategy + Demonstration of skills through Tasks = Evaluation, when integrated into a unified and coherent whole would definitely bring about radical improvements in the English literature teaching programme.

Normative Grammar and ELT Curriculum

Suresh Agrawal *

During the last two decades, the scope of English language teaching has expanded at a tremendous pace. Many new programmes of teaching English by preparing instruction materials based on different systems have been initiated. But compared to the energy, time and money spent on learning English, there has been little improvement in the level of proficiency acquired by our English language learners. This is because after an initial interest, majority of students are not able to cope with tedious drills and rote memorization. As a result most of them drop out from our English Language Teaching (ELT) programme in the middle.

What is the root cause of this frustration ? Why our English language learners even after their successful completion of English language programmes find themselves inadequately efficient to cope with the actual demands of communicating through that language (i.e. English) ? Our normative teaching trends are, of course, responsible for it. Today, our ELT classrooms have been reduced to the reports of prescribing grammatical rules. The classroom is restricted to examining comprehension and performance of language 'exercises' (Exercises on prepositions, on articles, or spelling errors, etc.) covered in a particular course. The teaching in the present day classroom is often characterized by traditionalistic view i.e. the teacher gives the students a long list of rules and regulations with a long list of their exceptions. Consequently the ELT has become a nonsensical mathematical task as it creates more genuine problems for the teacher as well as for the students.

English is taught as an 'exercise' or as a preparation for eventual realisation of goals, but having no exposure outside the classroom, it becomes really difficult for the learner to acquire the competence which a native speaker of the language possesses. English is acquired as an 'artifact' in which speakers and listeners remain detached and uninvolved from the communication point of view.

The major shortcoming of our ELT programmes is their exclusive concern with the teaching of language as an ideal norm. This over-emphasis on memorization of grammatical rules as an ideal norm has done a great harm to our ELT curriculum. And now a days, the reaction against the extreme has resulted in an equally disastrous negation of all grammatical study. It poses a serious concern for the ELT programme in India. And the questions that invariably come up are : Can we teach our students well without grammar? Can we really dispense with the need of grammar? These are some of the legitimate questions and unless we find answers to these we cannot proceed further.

The answer to the above questions is, of course, in the negative. The knowledge of grammar is necessary for a second language learner as it acquaints him with the conventional use of linguistic symbols. Naturally, this negation of grammar teaching has resulted in a more problematic situation. There is a need of change in the process of imparting the knowledge of grammar. In India, grammar is still taught in the form of 'prescription' as if it is given by a doctor to a patient. The classroom teaching is restricted to the notion of artificial "correctness" found in many grammar books (e.g. Nesfield's Grammar). This ideal norm or correctness point of view assumes that grammar is a set of rules to which the language must adjust. Secondly, the type of problem that results from this type of grammar requires the student to define a noun, a subject, a direct object or it requires him to write N above the nouns, V above the verbs, DO above the direct objects in given sentences. Since many native speakers of language are unable to define by technical terms the grammatical elements of their native language and since it does not create any problem from communication point of view, we cannot accept that kind of problem as representing the task of learning a foreign language.

Since grammar is not merely definitions, (definitions of nouns, verbs, etc.) nor grammatical terms in the older sense, nor it is an absolute rules of correctness, it should be "considered as matters of form that correlate with matters of meaning." Thus a revolutionary change in the strategy of teaching grammar is the need of the hour. Grammar, in real sense, is not what is being taught in the present day classroom.

Grammar should be taught as formal devices used in a language to convey certain meanings and relationships. For example, the word order of 'were' before 'they' in the sentence "were they in the restaurant"? Spoken with a falling high-low intonation is the signal for one type of question in English. For better ELT, it is necessary that the students should be provided with opportunities for performing graded communicative

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The Relevance of Studying English Literature

A Survey Report

Janesh Kapoor*

A survey was conducted in the Department of English of Himachal Pradesh University, Shimla to record the responses the students of the department developed towards their two years long course of studies. The method followed was to distribute a questionnaire consisting of three questions :

1. Why did you join M.A. English?
2. What do you think is the right approach to the study of literature? and
3. What have you gained so far by studying literature?

Each question had multiple possible answers ranging from concrete options (viz. studying literature because of interest, job opportunities, etc.) to eccentric choices (like it being more fashionable to study English literature), and in some cases there could be more than one answer to a question. Space was provided in the questionnaire for any other comments that the students might like to make. They were also asked to make some direct comments on the relevance of studying (English) literature.

The survey was conducted among sixty students from II and IV semesters. It was felt that the questions would elicit more valid responses only from such students for they had had a good deal of exposure both to the syllabus and the teaching-learning process. The project was considered legitimate because since at least fifty bright young people enter the department every year to spend two crucial years of their life, their reactions to the experience of studying for an M.A. (English) degree, whatever their nature, must be of significant value and importance, both academic and social. It is inevitable that these young men and women, gradually interacting with whatever is outstanding in seven centuries of English literature, must respond to the course and everything associated with it in several ways – emotional, practical, social, etc. It is also inevitable that they must think of the relevance factor for their entire future may well come to depend upon this course.

Out of the sixty students among whom the questionnaire was distributed, only thirty-two returned it with their responses which constitutes 53.33% response.

(Note : All the mathematical data given in this report is calculated with respect to thirty-two responses only. But the total number of responses to a particular query may exceed thirty-two, as many students responded in more than one way).

Among the thirty-two students who responded only nine (28.12%) declared that they had joined M.A. English because of their interest in the subject. One female student (3.12%) took up the study of English literature in continuation of her family tradition.

Eight students (25.00%) were attracted by job opportunities as teachers in schools and colleges made available by studying English literatures. Ten (31.25%) students wanted to improve their English and they regarded good English as a status symbol. They were also aware of the fact that the medium of many a competitive examination is English. Three students (9.40%) stated that they had joined the course because they had nothing else to do. Six students offered varying, relatively subjective or abstract reasons for studying English literature. These may be summed up as : aesthetic/intellectual pleasure; desire to experience alternate lifestyles, values, attitudes, etc.; to arrive at an awareness of universal experiences by studying human nature.

The second question (What do you think is the right approach to the study of literature?) also evoked a mixed response. Ten students (28.12%) regarded a knowledge of the basic concepts and issues involved as a must for a useful study of literature. Four (12.50%) believed that literature can be best studied by participating in seminars and tutorials. Two students (6.25%) thought that preparing for examinations ought to be the best way for studying any subject.

Many more opinions were expressed regarding the study of literature. Five students (15.62%) stated that they studied literature for its own sake. An equal number of students felt that literature should not be studied in isolation; rather, other related disciplines like history, philosophy and psychology must also be studied as the background to literature. One student added a remark about the time factor with which we find ourselves rivetted during the M.A. course. As the duration of the semester is very short and the number of books to be studied is large, so the tendency on the part of the students is to overlook the important aspects of a piece of literature and confine themselves to the examination pattern alone.

As regards their achievements in studying English literature sixteen students (50.00%) discovered that literature has left a significant impact upon them. Of these students, eleven professed that study of literature has given them a better understanding of people and life, resulting in the betterment of their personality. The other five students claimed that their command over the English language (in terms of vocabulary enrichment and usage of words) has improved. Six students (18.75%) derived aesthetic/intellectual pleasure from their study of literature. Eight students (25.00%), however, insisted that the study of literature had left no impression upon them. Only two students (6.25%) said that they were unaware of any change effected in them.

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Apart from the questionnaire based survey, person to person dialogue was also held with a number of students which often developed into a hot but useful debate. Those students who came to the department after studying for quite a few years in convents/public schools and colleges felt that at the postgraduation level the teaching format should be that of a participator seminar. There should be far greater interaction between the teachers and the students; and the seminars should also include teachers and students from other related disciplines. And some of these students (as already mentioned) stood for the purity of study of literature. The study of literature, they argued, should not be corroded by what they thought were monetary or other trivial aspirations.

More than 70.00% of the students, as evident from the collected data, joined the M.A. course not because of interest in English literature, but because of different utilitarian reasons. Though the importance of many of these reasons cannot be denied (viz. getting a job, social status, etc.), yet lack of any concern for literature as discipline is alarming. Interest needs to be generated if the vitality of study of literature is to be maintained. The following steps might prove fruitful in this direction :

(a) Immediately after the students are admitted to the M.A. course, they should be given a two weeks' orientation course, during which they should be made familiar with what literature is about, its kinds, and its various technical aspects.

(b) Alongside, the authorities should organize appreciation workshops, at least twice in an academic session, to direct, refine and develop students' responses to a literary piece of their choice.

Regarding the teaching format being that of a participatory seminar, the suggestion is not practicable for the standards of basic education in our country vary so greatly from place to place. There are many students in M.A. English who need to be taught or initiated into the fundamentals of the English language. Even if the ideal of participatory seminar has to be realized sometime in future, significant changes will have to be made at the root level.

Moreover, the people opting for participatory seminars or purity in the study of literature come from upper middle/affluent families. Also these were mostly female students (5/6; 83.33%) with no precipitate demands on their studies. The students belonging to the lower and lower-middle classes, male or female, however, cannot afford the luxury of studying literature for its own sake, as they are pressed by financial and social circumstances. For them securing a job is the chief consideration of any academic venture.

Those students seeking good jobs were desirous of improving their English which is a prerequisite for appointment to any substantial office. However, language is a separate discipline and needs to be pursued as such. In fact, it should be possible for the syllabus design to include a warning to the prospective candidates that the course is not designed to improve spoken Englis, etc. It should also be possible for the university to start short term courses in English speaking, etc.

But what about those students who did not respond at all? What could be the reason behind their indifference? It is difficult to be certain in the absence of any data. One can only speculate because our attempt to talk personally with some such students and elicit their reasons for their indifference did not yield fruit. The reasons can vary from what is called 'mood' and includes laziness to an absolute lack of concern even for what happens to be two of their most lively years. Another possibility is that for some of these students the university years are only a temporary interlude. These can be the sons and daughters of businessmen, etc. who have no attachment or interest in the subject they are studying, or in related activities. The proportion of such students might be small, but their presence has some disturbing implications. Not only do these people tend to trivialize the value of university education, they also deprive a number of needful students from entering the university.

During the personal dialogue one student, on being strongly urged, said that the M.A. syllabus is a useless thing for it has no relatability to our present; that he was studying it for lack of any alternative. It is possible that this irrelevancy-syndrome (whatever its merit) underlies some students' refusal to respond to the questionnaire.

And some students bluntly refused to respond saying that they did not want to think. An impertinent question needs to be posed here. Do they not want to think or they cannot think? Throughout the school and college education (and in M.A. as well) most students have relied on guides/help books which furnish them with readymade material for passing examinations. They never had to think.

In fact, some of the students had stated that preparing for examinations was the proper method to study literature. But in the present cult of education through guides/help books passing exams has become the only end of education. Readymade education has to be abolished if we wish to create a healthy academic/literary tradition. No comments if it is to be believed that the directors of our education policy are not aware of what this readymade education implies both to students and to society.

English Literature Question Paper at Higher Levels

K.R. Ramachandran Nair*

There was a time when English teacher thought that examinations only interrupted teaching without contributing much to the students' linguistic achievement. In 1941, the Norwood Committee in England even recommended stopping the practice of examining students in literature. It was pointed out that teaching of literature suffered because of the manipulations that had to be resorted to in literature curriculum and syllabus to adapt them to the requirements of examinations.

However, today, there is a realisation of the need for examining and testing in English literature especially in countries where English is being taught as a second language. Though the methodology of teaching and testing may differ from country to country, there is agreement regarding the purpose of teaching, and therefore, of testing. This purpose is to establish a measure of each pupil's attainment in English language and literary values. Though students study English literature at the higher levels, the implied purpose is not to acquire creative abilities in the literary use of the language but merely to acquire functional ability in its use for social, intellectual, educational and administrative purposes. In most countries examinations in English act as select mechanisms for students to get into various positions in public service. What is expected of a graduate or postgraduate in English literature in countries like India is the ability to write and speak correct English and the ability to comprehend standard English writing through purposeful reading. So the purpose of examinations at the higher levels should be to assess these abilities in their entirety. The effectiveness, validity and reliability of examinations depend upon the nature of the questions asked and the mechanism of evaluation.

The major causes for the erosion in the standard of English among the students after Independence is the abolition of English as the medium of instruction in schools and the poor quality of textbooks and teaching. But these facts were overlooked and the emphasis was laid on manipulating question papers to suit the falling standards. Students had been showing a progressive deterioration in the power of expression in English. As a remedy question papers were downgraded so as to demand no answers requiring powers of expression. The students lacked the knowledge of structure and the niceties of grammar; the remedy was the restructuring of the question paper into objective type that demands answers by choice or guess. Short and shorter questions became the fashion. Different schools of language teaching experts appeared on the scene, some pleading for the total abolition of poetry and other creative forms of literature from the syllabus, some others advocating short-extract lessons and more and more extensive readers. And all of them gleefully agreed in the emasculation of the question paper.

With the emergence of the English teaching experts, essay type questions even at the postgraduate level fell into disrepute. The fact that an essay test is particularly suited to test the depth of assimilation of values and the ability of expression is ignored. Objective type questions with fill-in-the blanks, true or false, matching and multiple choice format took the place of the essay type. Even when a reluctant essay question appears it is qualified with a warning that the answer should not exceed 200 to 500 words. Today 'short notes' (30 to 50 words), 'short answers' (100 to 200 words) questions form a major part of the question papers. Good students are inhibited by the restrictions whereas the sluggish scribble truncated answer pieces and obtain the same grade as others do. When a short note question carrying two marks is attempted by a student, he gets at least one mark irrespective of the quality of the answer. Often the required number of 'short notes' and 'short answer' questions cannot be squeezed out of the texts and the question-setter has to masquerade essay questions as 'short notes' and 'short answer' questions, thus unsettling students' response to the question paper.

Questions can be classified into three types – factual, problem type and opinion type. Objective type questions are concerned only with facts or bits of facts. But in literature fact-bits are irrelevant. What is significant and relevant is the student's ability to reason out, analyse, compare and interpret what he has assimilated from the texts. At the higher level in literature, tests are not intended for recall of facts or application of facts as in history or natural sciences. The aim is to test the student's ability to assimilate and express thoughts and values in presentable English.

After successive failures of the experiments with question papers in English, most Indian universities have accepted a compromise of sort. Today, the English literature question paper at the undergraduate and postgraduate levels in our universities exhibit an uneasy combination of the objective and the essay type. The remedy lies not in substituting the essay type with the objective type or in combining the two into a hotchpotch but in evolving a reliable and effective essay type question pattern for the undergraduate and postgraduate classes.

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In setting an essay type question paper which is the only effective tool to measure student achievement in English literature, the question-setter should be aware of the following points :

1. Questions should provide a definite framework within which answers can be given. "Write an essay on the various aspects of Shakespearean tragedy" is a bad question because it is unspecific. "What aspect of Shakespeare's concept of tragedy are reflected in King Lear ?" would be better because it specifies the framework and relates the student to the text.
2. Questions should not be vague and indefinite so that it can be answered in different ways. "What do you say about Lear's division of the kingdom?" is a bad question. "How does Lear's division of the kingdom lead to his tragedy?" would be better.
3. One question should require only one answer. Several topics should not be clubbed together in one question. Avoid questions like "How does TS Eliot use the theme of martyrdom in *Murder in the Cathedral* and how does his style suit the theme?" This should come as two questions – one on the theme and the other on the style.
4. Questions should not put the answers into the pupil's mouth. "Don't you think King Lear is foolish in dividing his kingdom?" is an example.
5. Leading questions should be avoided i.e. questions beginning with 'Do you think ...., Is it ....Is it not ....', etc.
6. Don't restrict the urge of the pupils for expression by asking them to answer within specified number of words. A good answer in English literature cannot be restricted to 200 words. Short and shorter answers should be avoided. Allowing students to write long answers gives the evaluator opportunities to verify whether a particular error in spelling or grammar is inadvertently made or not because in a long answer the student is likely to repeat the same words and constructions several times.
7. Questions should be related to the teaching time spent on each topic/section/unit. So the traditional practice of 'All questions carry equal marks' should be given up and marks should be allotted according to the time required for each question to be answered. Marks should be proportional to the teaching time spent on each sub-topic in each unit. For example, a particular unit, say in poetry, may consist of one sonnet of Donne (1 period), one ode of Keats (3 periods), one lyric of Wordsworth (2 periods) and one dramatic monologue of Browning (4 periods). In a question paper of 2 hours duration and 100 marks for the above unit, it is clear that 40% marks should go to Browning and 10% to Donne and so on. Questions should be so devised that the time necessary to answer them also is proportional. So marks allotted cannot be equal.

This kind of question paper-setting reflects the weightage given to each unit and sub-topic in the syllabus and is free from the several drawbacks because of which essay type questions were discarded once.

Innovation and Improvisation in Language Teaching

(Contd. from page 7)

The learner can overcome his own difficulty after he has seen the teacher demonstrating it. Here comparison is a part of the improvisation. The teacher has to work with what he has already got. It is inevitable that he makes a thorough study of the differential phonetics, differential grammar, differential lexicology and even differential stylistics. The rich dividends that accrue to the teacher from this are of great help to him in his teaching. Selecting on his own the differential features of L1 and L2 will make him self reliant. This is a maturational process of teaching learning. It is not only in the splendor-making and epoch-making events that innovation lies.

Innovation and improvisation are many faceted. A teacher draws a line and then draws another slightly bigger. He calls the first a smaller and the second a longer line. He adds another, bigger than the second and calls it longest. This demonstration of degree on the blackboard is easily understood. Another teacher closes and then opens one of his eyes. He calls it 'winking'. He gives a demonstration of the meaning. These are aspects of the same potentials of ability.

Choosing by himself ways and means of delivering the goods to the class the teacher becomes eclectic. A very rigid adherence to just one method deprives him of the rich variety of approaches, methods and techniques available to him. In demonstrating the meaning of winking he can be more successful by following the mimicry and memorization method. Anyone who is shy of such a demonstration can rely on the cognate method, the dual-language method. Rigidity in pursuing one and only one method will kill originality of the teacher. He is indeed an enviable teacher who follows the direct method. But it requires a price : a very high degree of competence in the use of L2 or the target language. If you are one such, go ahead. Three cheers to you.

The Teaching of English Literature to M.A. Students

A Viewpoint

S.C. Saxena*

The study of English Literature in India is not the same thing as studying of another western literature. The planting, rise and growth of English in India from Macaulay's 'Minute' (1835) to the Sahitya Academi Award winner Amitav Ghosh's 'The Shadow Lines' (1988) has been a long, love-hate affair. According to one estimate about four million people today read and write English, the quarter of this figure used English at the time of Independence. In a huge country of eighty crore people, this figure is microscopic. But this seemingly insignificant figure is higherly articulate and influential. The language is used at the government level and is still the medium of instruction in many institutions. English is a vital bridge of communication and a powerful prop of national integration.

Today, the Indian English writing is not found in literary back water. The recent surge has swept it to the international mainstream. Salman Rushdie, Vikram Seth and Amitav Ghosh belong to a growing tribe of writers who command respect in literary circles besides being highly saleable. Today, the Indian writing in English has found a new character, greater depth and wider acceptance and this should reflect prominently in the syllabuses prescribed for M.A. students of English Literature. This Indian connection will make the learning and teaching of English Literature relevant and rewarding experience.

As the tools of modern communication get sophisticated, this world seems to acquire the look of a global village. In this rapidly-changing scenario, it is pertinent that there should be more interaction among major literatures of the world. The term 'English Literature' should include the best of world literature which is available in English. There should be more spotlight on the literature being written in Latin American countries and this sub-continent. English has freely accepted words from the other languages, there is no perceptible reason why the best literature written outside England should be excluded from 'English Literature.'

In Indian context, it will be more profitable if a paper on Comparative Literature is introduced in the syllabuses so that a meaningful channel of ideas flows from one regional language to another and an integrated view of India emerges from this interaction. This interface among literature written in Indian languages at one level and world literature at the other will make the study of English Literature an enriching and energising experience. The study of English Literature is a multidimensional process and only this approach can give us a coordinated view of the subject.

So far, I have focused on the literary content and design of the syllabus for English Literature at M.A. level. Besides inputs of literary texts, it is also vitally essential to have a sound grasp of the English language in all its aspects. The term 'English Literature' should also include intricacies in the Indian context. The language should not be neglected at the M.A. level. Many teachers' tendency to look down upon the language paper should be discouraged. The language is as important in the study of English Literature as the great literary works.

To sum up, I would like to say that the points and perceptions pinpointed in this paper about the term 'English Literature' and its syllabus should be seriously debated and necessary changes should be incorporated in the syllabuses in this fast-changing world. Fundamentalism in the educational syllabus is as bad and backward-looking as in the field of religion.

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Normative Grammar and ELT Curriculum

(Contd. from page 13)

tasks and create confidence among the pupils without the interference of direct monitoring. Our ELT courses should seek to provide the learners with a general capacity to enable them to cope with undefined eventualities in the future. This can be made possible only when we frame our ELT courses in accordance with the general aims of our learners.

It would require an immediate change in the three cardinal factors 'Men, Materials, and Methods' i.e. Teachers, content of the course books and, process and way of teaching. These innovations are to be introduced at all the levels of this three dimensional system of language teaching programme. For our teachers a sort of orientation programme can be organized to motivate them. These motivated teachers after having realised the need of dynamism may be instrumental in making our ELT programme more fruitful. Secondly, reframing of our ELT courses is needed. The course content should be such that the learners may find it a boon in developing their communicative skills. Our courses can be in the frame of general concepts with linguistic corpus at its centre. Lastly, normative trends of teaching English are to be discarded at every cost. This rejection of prescriptive teaching does not mean the exclusion of grammatical terms from the curriculum but their inclusion in such a way as they may increase the fluency of our Hindi speakers of English.

To conclude, the ELT scenario has kept pace with the dynamic needs and aspirations of the people in all the European countries but this has not been possible in the developing countries like India. And this normative stagnation is an alarm for our ELT courses. It requires an immediate change. This change can be brought about by the changes and modifications in the present content materials, modes of testing and educational environment in accordance with the communicative needs. These changes can significantly improve the existing shape of our ELT programmes and can make it a success.

Education and National Development

Eminent Space Scientist, Padma Bhushan Dr. Krishnaswamy Kasturirangan delivered the Convocation Address at the fifth convocation of Sri Krishnadevaraya University, Anantapur (Andhra Pradesh). In a roving address Dr. Kasturirangan stressed the need for an educational system that can form an integral component of an all round national development programme and in particular for rural development. "Social, cultural and linguistic diversity compounded by economic disparity puts extremely severe demands on conceptualising and implementing any viable educational system for such a purpose at national level," he observed. Excerpts

Over the centuries, in the face of aggression and foreign domination, India has exhibited tremendous courage, indomitable spirit to assert itself and above all a surprising level of resilience and ability to assimilate the best of the alien cultures. I shall in this connection recall the observations of an eminent scientist about the British rule and the efforts to introduce English language and English law. The British, it is believed, wanted the help of Indians to administer this country, especially at the level of clerks and for other similar functions. They probably thought that by exposing Indians to English language and English law, one could kill two birds at the same time; the necessary manpower resource could be generated on one side whereas on the other side, the majesty of English language and the dignity of the English law could produce a sense of inferiority complex among the Indians. In this context, it is believed, foreign missionaries established several colleges in India culminating in the formation of early Indian universities. The interesting outcome of such an attempt on the part of the British is that, the Indians quickly excelled and picked up the subtle nuances of the English language and English law and thus tended to exhibit a sense of equality with British learning. The British then decided to expose Indians to the ways of Western science and its sophistication, a special preserve of Western culture. In trying to impress Indians and probably subjugate their thoughts and actions through the instrument of Western style education of practical sciences, they totally overlooked the rich traditions of India in this field. In the pre-industrial revolution period, India's expertise in every line of manufacture such as textiles, wood and ivory work and metallurgy was world renowned. West recognized India's skill in material and chemical technology as unique. These included among other things India's capabilities in bleaching, dyeing, tanning, soap making, fire works, building materials besides those related to mining and metallurgy. Investment casting has been an age old tradition of this country. Perfecting the tempering of steel is another case in point and the secret of the sword of Damascus came to the Arabs from this country. The Industrial Revolution in Europe qualitatively changed the situation since it led to more efficient and cheaper processes and manufacturing methodologies with which India's traditional approaches could not compete. Introduction of Western methods of education in science and technology thus proved to be a welcome opportunity for Indians, keen to update their knowledge and sharpen their skills. In such an atmosphere, one witnessed the emergence of several distinguished Indians in different walks of life. Eminent educationist cum statesman, Sarvepalli Radhakrishnan; literary giant, Rabindranath Tagore; Renowned physicists, M.N. Saha, S.N. Bose and C.V. Raman; mathematical genius, S. Ramanujam; are but a few of such personalities whose names can stir pride and inspiration among any Indian. It is particularly worth recalling the observations of the renowned German Physicist, Sommerfeld during his visit to this country in 1929 that India was an equal partner with the West in science.

Let us now look at the present scenario of the country. India since its Independence has made tremendous strides in education, science, technology, agriculture, health and industrial development. For example, the country has increased agricultural production from 55 million tons per year at the time of Independence to nearly 175 million tons per year presently. This phenomenal increase in the agricultural produce has been realized through improved agricultural practices including use of fertilizers, implementing new irrigation schemes besides appropriate inputs from the modern developments in plant genetics. The important challenge here is how India will feed its projected population of about one billion by the turn of this century, calling for the production of nearly 225 million tons of foodgrains, especially, with the limited land that is available for agriculture. Establishment of a chain of laboratories under the Council of Scientific and Industrial Research, the Department of Science and Technology as well as in several educational institutions created the necessary infrastructure and environment for carrying out pure and applied research in a variety of the scientific and technological disciplines. Setting up of Departments of Atomic Energy and Space clearly emphasized India's determination to adopt the most modern technologies and techniques for national development. Today, we spend nearly Rs. 2000 crores, in research and development. One striking aspect of R&D funding so far has been that no worthwhile project or programme has suffered in our country for the lack of financial support.

At this juncture, I shall digress a little and mention briefly our achievements in the area of space satellites over the last two decades and how they have been used for national development. We started our satellite programme in a very modest way by hiring a few sheds in the outskirts of Bangalore way back in 1972. We had a very sharply focused goal of establishing the infrastructure needed to design, develop and test India's first space satellite, creating the requisite type of human resources and undertake the development of the satellite itself. The time available to us to do this, was just three years. The highly enthusiastic and dedicated team of engineers and scientists who were assembled for this task, with the support of several industries, R&D institutions as well as institutions of higher learning,like universities and Institute of Science accomplished this within this record period and the country witnessed the launch of 'Aryabhata' in April 1975. Over the two decades since we were ushered into satellite era, the pace of progress has been rapid. In a systematic and steady manner, the programme evolved from the design and development of experimental earth observation and communication satellites like Bhaskara and Apple to the current capability of building and operating satellites which provide routine services in the areas of earth resources survey and management, communications, meteorology as well as TV broadcasting. In the process of successfully designing and developing the Indian remote sensing satellites IRS-1A and 1B as well as INSAT-2A satellite which was recently launched, we have established our pre-eminence in this area in a short time scale of just two decades starting from scratch. Both IRS and INSAT-2 satellites compare in their capabilities and sophistication to the best of similar satellites build anywhere in the world including US and Europe. My point in narrating this experience to all of you is just to highlight and emphasize the fact that given the proper support, encouragement and environment as well as a well defined goal, we Indians are second to none in this world in achieving the most complex and difficult tasks.

A few observations about the excitements in science are in order at this point. The world of science has been witnessing an explosion of discoveries in areas such as Physics, Molecular, Biology, Astronomy and Medicine. In a sense, the current period can be truly characterized as renaissance in science. Contemporary physics has witnessed several exciting developments. Topics such as lasers, super conductivity, especially high temperature super conductors, chaos, symmetry and fundamental particles promise rich crop of exciting results in theoretical and experimental research. For example, the recent discovery of high temperature super conductivity in certain oxides with transition temperatures as high as 125^0K, much above the boiling point of liquid nitrogen, with attendant possibilities of applications in several fields of engineering and technology has brought super conductivity out of cold. In the area of molecular biology, invention of gene cloning and sequencing has allowed biologists to produce pharmaceuticals like growth harmone and interferon and also to begin assembling a complete atlas of human genetics. One hears of new discoveries almost every other day in the exciting field of astronomy. Exotic objects, highly dense and extremely compact, like neutron stars and black holes are currently areas of feverish research. Sophisticated space facilities like the Hubble Space Telescope has been built that can enable seeing the Universe virtually at its observable limits, thus trying to seek answers for such fundamental questions as the origin of the Universe itself. Developments in instrumentation and new technologies have made possible new directions of research in the traditional areas. A new technique like remote sensing for example has been used in the area of Archaeology. The advent of super computers has enabled modelling the complex fluid dynamical characteristics of the atmosphere, thus making possible for the first time reasonably accurate climatic and weather predictions.

Rapid and significant progress in science and technology with the primary objective of improving the quality of life for humankind, has not been without its side effects. For example, large-scale developmental efforts using science and technology have resulted in the indiscriminate use of depletable resources, like fossil fuel, particularly by developed countries. Anxiety to ensure availability of such resources, notwithstanding from whichever region of the globe, has created global and regional tensions. On the other hand, uncontrolled use of resources, in the name of economic development, is already having telling effects on the environment. The depletion of the stratospheric ozone with the possible deleterious effects of ultraviolet radiation on the biological species of the Earth and the predicted green house effect because of the large scale release of carbondioxide and methane into the atmosphere are two such case points. Such issues are already receiving the attention of physicists, chemists, biologists, engineers as well as environmental and social scientists. These developments by their very nature need to be tackled on a global scale but with specific inputs from different countries. The related problem, with its several dimensions, offers tremendous challenges and provide unique opportunities for many of you, who have a flair for inter-disciplinary research. It involves observations and analysis besides identification of appropriate solutions, which in turn may call for new innovative techniques as alternative solutions to meet the ever growing demands of energy and resources.

Let us now examine the role of higher education in the context of rural development. One of the important objectives of higher education particularly for a country like India should be to bring in the related expertise towards integrated rural development, as nearly 75% of the population still reside in rural areas. What we observe today is just the opposite. Students from the rural areas, once they graduate, would like to move out immediately for greener pastures in the so called more developed parts of the country. Today, the development of rural areas has not become a part of the career priority for the educated. Part of the problem is the value system our society adopts which attaches dignity for certain types of job. Unfortunately, working in a development programme of a rural area does not find a place in their list. We can ameliorate this situation by providing inputs to such activities through many of the modern developments particularly in the area of technology. I shall illustrate this aspect with a case study of the efforts by ISRO which undertook a project in the area of district level planning for the all-round development of the Anantapur district. As you are aware, each district plan should specifically deal with the problems typical to the district such as its natural resources, terrain and environmental condition, agro-climatic setup and socio-economic profile. For example, a chronically drought-prone district like Anantapur needs a different package plan as compared to that of a flood- prone district. Anantapur district receives an average annual rainfall of 540 mm. The north-western part of the district receives very limited surface water irrigation under Tungabhadra high level canal command area. The population is mainly dependent upon agriculture in spite of scantly water resources availability. Groundnut constitutes the major agriculture produce. Frequent failure if monsoon and non-availability of assured irrigation facilities are the major causative factors for frequent droughts, fragile socio-economic conditions, and retarded development of the district. The data from the Indian Remote Sensing Satellite has been utilised for deriving information on surface water, ground water, soils, land use/land cover, and wastelands. Secondary data on climate, demography, and socio-economic aspects are collected to analyse the demands on various resources in the district. By integrating such a multi-thematic information, management decisions and the site specific recommendations are arrived at. The recommendations so generated become the basis for the district authorities for implementation. This effort clearly demonstrates how a high technology area can be used for solving problems of grass-root nature. This is just to illustrate how new possibilities are opening up for the new educated generation of modern India to work in rural areas where their expertise and competence can be fully utilized for the integrated development of the region.

Let us now address briefly the needs and complexities of establishing an education system that can form an integral component of an all-round national development programme and in particular for rural development. Social, cultural and linguistic diversity compounded by economic disparity puts extremely severe demands on conceptualizing and implementing any viable educational system for such a purpose at the national level. There are several dimensions to such a broad based educational system. For the rural population, one has to impart basic and practical knowledge on health, hygiene, environment and better agricultural practices and this has to be necessarily region and language specific. Another dimension, one can think of, is upgrading the skills of shop floor workers in industries on a periodic basis. A third dimension for such an educational system could be the quality improvement programme for teachers at primary, higher secondary and college levels. One can identify several other needs under such an educational concept. If one were to bring in the conventional and traditional methods of education towards implementing such an ambitious programme, the attendant needs of resources, both men and material, would be simply impossible to generate under the present circumstances in the country. It is in this context that concepts of distance education through modern technologies like space technology has been catching the attention of developing countries such as India and China.

In India, several interesting experiments have been carried out by ISRO in this direction using the INSAT series of satellites. Development of distance education system calls for establishing a two way communication system through which the interactive communication can be established; questions can be asked by audience and answered by experts to clarify the doubts. Using inexpensive hardware, recently an experiment was conducted in Gujarat using INSAT-1B, where village *sarpanchs, preraks* and voluntary teachers in Rupal, a remote village of Gandhinagar district were able to interactively communicate with teachers providing instructions located at Space Applications Centre and Gujarat Vidyapith at Ahmedabad. This audio-visual experiment also involved specially developed talk back facility using which trainees in the remote village would ask questions and carry out two way discussions with the trainers at Ahmedabad on a real-time basis. Another experiment involving INSAT-1B was carried out in February of this year particularly as a part of the continuing education in industry. In order to meet the emerging needs, out of the fast developing technology in the present day socio-economic environment, the demand for continuing education in the industry has been increasing. The training requirements are very large and varied. The existing training infrastructure just cannot meet the requirements of human resources development in different areas of producation, each having a sizeable requirement. The training programme was conducted through classroom lectures supported by computer based graphics and pre-recorded actual shop floor situations, audio-visual aids and discussions. The experiment enabled evaluation of the effectiveness of a satellite based interactive system as an instrument for providing continuing education in industry and to gain insight into the organizational, managerial and technical constraints besides evaluating the problems in operationalizing such an approach on a large and wide scale. This mode of distance teaching through a broadcast cum interactive network is expected to be very useful in compressing learning time as well as in bringing about lasting change in the maintenance practices and attitudes of a substantially large number of participants located in remote training centres.

More recently, using INSAT-2A, a very innovative satellite instruction experiment was carried out by which students in nine centres of the Institutions of Electronics and Telecommunications Engineers listened to lectures given by some of the outstanding teachers in the IITs and the Indian Institute of Science. The same two way interactive communication was available in this experiment also where the lecture was broadcast via satellite in a video mode and received at different locations though low cost direct reception terminals. The participants at these locations could interact with experts at the transmitting end on an audio channel via satellite. This approach is surely expected to expand in the coming years and thousands of youngsters will in future have the pleasure of listening to, and of being trained by the finest teachers in the country. These pioneering experiments, besides being a right and definitive step in establishing a national system for developmental communication and education also open up interesting and challenging opportunities for innovative software development that will serve as instructional aids. Those of you who have interest in developmental education and communication will find this emerging area a very fertile field to work and produce results.

You, my young friends, have great challenges in store ahead. The problems faced by India, because of its large population and meagre resources provide tremendous scope for those with innovative and original bent of mind. In order to optimize the use of the resources, we need to work in the area of high technology, new energy conservation methods and better management systems. In order to contain the population, which is growing at an alarming rate, we need to adopt new social and economic structures besides innovative approaches in the area of health and family welfare. In order to increase our agricultural productivity, adaptation of new methods related to plant genetic engineering, fertilizer utilization, water conservation and overall environmental protection are called for. Production of quality goods which can match the international standards is a must if we have to stand the competition of other countries in the export area. These are in addition to the ever growing excitements in science and technology that open up new avenues in research and development. In order to promote and sustain such efforts, we need to create an atmosphere and a culture which will enable right recognition for the deserving. About 2,000 years ago, a Greek philosopher, Pliny the Great, said that any nation which does not respect its intellectuals is bound to perish. Many of us who have spent two to three decades in our professional career, have the moral responsibility to sell India to our own young Indians. While being rightly proud of our cultural past, we should develop an attitude that we own India and that it is our duty to shape it. I am sure, you, as the representatives of the younger generation shall accept this onerous task of facilitating a smooth transition to next century through your dedication, hardwork and commitment. By the time you handover the torch to the next generation, one should see a transformed India which is highly industrialized, self-reliant in vital areas of technology and science, fully capable of feeding its people, after having contained the population to a level which is manageable and where basic comforts are assured to each and everyone of its citizens. In achieving this goal, the path is neither going to be straight forward nor clear cut. I am reminded of the following episode in this connection. When explorer, David Livingston was working in Africa, some friends wrote to him : "We would like to send other men to you. Have you found a good road into your area yet?" Livingston wrote back : "If you have men who will only come if they know there is a good road, I don't want them. I want men who will come if there is no road at all." Livingston knew that new ventures need pathfinders – people willing to strike out and persevere without a clear path or even any assurance of success.

Ecology and Sustainable Development

Prof. P.S. Ramakrishnan of the School of Environmental Sciences, JNU, recently delivered a talk on "Ecology and Sustainable Development : A Research Agenda for India" at the Botany Department of Kurukshetra University. He said ecological studies in India so far have largely concerned with ecosystem structure and function, particularly comparative evaluation of primary producers. The studies have often been imitative of western ideas and methodologies. It is only in recent times that ecologists have attempted relating environmental issues with economic and developmental consideration.

Sustainable use of natural resources and sustainable development have become key concepts not only for ecologists but also for economists and developmental planners.

The concept of sutainability implies the use of ecological system in a manner that satisfies current needs without compromising the needs or options of future generations. There are obvious trade-offs. Achieving a better understanding of these trade-offs has to be set as one of the key objectives for future research. The research themes may be centered around (a) Biodiversity and sustainability, (b) Diversity in a changing environment, and (c) Human dimensions of biodiversity.

Since ecological issues in developing countries such as India are poverty related, they demand participatory research involving local communities in order to ensure sustainable development. Effective linkages between ecological process and social process studies need be established in order to give a new orientation to research. Such studies are extremely limited, the shifting agriculture-rain forest system in the rural landscape of north-eastern India is one of the very few examples. This work initiated almost 20 years ago looks at the inter-disciplinary linkages in a detailed consideration of ecology and sustainable development. Indeed, this study effectively considers the natural science-social science linkages that are so critical for basing development on a value system with which people can relate themselves and therefore participate in the process.

Veterinary & Animal Sciences Varsity Convocation

Delivering the second convocation address of the Tamil Nadu Veterinary and Animal Sciences University, the Director-General of the Indian Council of Agriculture Research, Dr. V.L. Chopra, called for basic changes in the format of curricula for undergraduate and postgraduate studies in veterinary and animal sciences, to face the changing scenario of global perspectives in biology.

He said the veterinary strategy should become more knowledge intensive, scientific and mindful of economising of resources. A structured yet flexible system particularly to meet the vast challenges in providing animal health protection was needed.

To achieve the desired production targets in animal husbandry, genetic manipulation and improved management should be complemented by a massive livestock health coverage programme that involved disease reporting, quick and precise diagnosis, disease surveillance and monitoring and evolution of strategies of disease control and their implementation. In addition, the country should guard against the constant threat of introduction of exotic diseases, Dr. Chopra said.

He called for efforts to reduce the cost of maintenance of cold chain for vaccine storage, develop a rapid diagnostic kit for foot-and-mouth disease, and early detection to control retro viruses of the Lenti group that pose a serious hazard like the human immuno deficiency.

Research in developing genetically tailor made animals (transgenics) and using them for production of high-priced therapeutics and pharmaceuticals, vaccines, drugs, peptide harmones and monoclonal antibodies should be encouraged. Besides, substantial inputs were needed for research to perfect the process of embryo transfer in buffaloes, as support from developed countries in this area might not be forthcoming, he said.

Mr. K.P. Krishnan, Minister for Agriculture and Animal Husbandry and Pro-Chancellor, announced the institution of an endowment for Rs. 25,000 in the name of the Governor for grant of academic prizes, two endowments for Rs. 1.08 lakhs and Rs. 50,000 in the name of the Chief Minister, Ms. Jayalalitha, for conduct of endowment lectures and giving academic prizes to the best women students, one endowment for Rs. 25,000 in the name of Dr. Chopra and another for Rs. 35,000 in the name of late Prof.Richard Masilamony, former Vice-Chancellor of the university.

Dr. V. Gnanaprakasam, Vice-Chancellor, welcoming the gathering, said a postgraduate programme in Technology was being introduced. This was in addition to several courses such as computer application, research methodology, wildlife management and breeding that had been initiated recently. It was also proposed to start an MBA course in Animal Husbandry and postgraduate course in Agro-Meteorolgy and faculty of entrepreneurship.

The University, he said, was awaiting clearance from the EEC and the ODA for a research project of Bovine Tuberculosis to be taken up jointly with the Centre for Tropical Veterinary Medicine, U.K. Besides,it was evolving a pharmacy course exclusively for veterinary science and was all set to promote agro-forestry among farmers and establish a technology park for animal sciences.

The Governor and Chancellor of the University, Mr. Bhishma Narain Singh, distributed the certificates and medals and awards to successful students. A total of 245 persons received their doctoral, postgraduate and graduate certificates at the convocation.

Admissions to American Universities

The International Educational Services Ltd. (IES) of USA (a well-known Corporation in the business of Students Placements in American Universities since 1976) and the Educational Consultants Consortium (ECC) of India have recently signed an agreement with the objective to provide fast and efficient services to Indian Students seeking admissions to American universities for both professional and non-professional courses of study. Under the agreement, the Chief Consultant, ECC has been authorised to perform all the duties of official Translator and Placement Officer for and on behalf of IES under the "Offical IES Seal".

Students desirous of going to USA for higher education will be asked to fill in the standardised "International Student Application Form", as per the Application Procedure Guidelines and send the same to ECC for "scrutiny" which in turn, will forward and recommend it to IES (USA). The IES will get the application processed in the university considered in view of student's qualifications, work experience, the course of study in which admission is desired, the financial constraints of the student, if any, requiring low-tuition fee charging university, the possibility of obtaining partial financial assistance after the first semester, for completing studies etc. The IES assures to forward the university's letter of Admission and the I-20 Immigration Forms to the concerned student within two weeks of acceptance.

Further information as also the application forms can be obtained free from the Consultant (Students), Educational Consultants Consortium, CF 4, Sona Building, 389 G.T. Karnal Road, Delhi- 110033.

Centre for Conservation of Plant Biodiversity

Guru Nanak Dev University proposes to create a centre for the conservation of plant biodiversity (CCPB) on the university campus at an estimated cost of Rs. 35 lakhs.

The aim and objective of this centre, according to the Vice- Chancellor, Prof Gurdip Singh Randhawa, will be to conserve the species content of the region, to compile flora of the region and to identify, conserve and propagate different species, to carry out research for better methods of conservation to carry out cytogenetical studies and to evolve new plant varieties of non-conventional economic plants, to evaluate, the economic importance of wild species and to interact with scientists and the public for dissemination of knowledge.

The structure and layout of the centre will include a lake, a circular feeder canal, a conservatory for arboreal species, a conservatory for herbs and grasses, a conservatory for wild races and feral cultivars, a conservatory for natural ecosystem, two temperature controlled green houses, research labs and office complex.

Research Projects for GNDU

The Union Ministry of Environment and Forests has sanctioned a research project on "radon pollution studies in human environment" amounting to Rs. 5 lakhs to the physics department. Similarly research schemes on "earthquake prediction using radon signals" costing Rs. 15 lakhs has also been sanctioned

Goodbye to Gowns at Calcutta Varsity

Like many other legacies of the British days, Calcutta University authorities have decided to bid goodbye to the tradition of wearing gowns during the convocation ceremony of the University. Henceforth, instead of wearing gowns, all those who will be attending the convocation, including the recipients of diplomas, senate members, vice-chancellor and the chancellor, will have an "uttariya", a folded piece of cloth, draped on their shoulders.

It was poet Tagore who first introduced the style of wearing an "uttariya", at the convocation of Visva Bharati.

The Publishing Scenario

In a series of moves designed to initiate programmes for the promotion of book publishing in India, the Federation of Publishers' & Booksellers' Associations in India (FPBAI) recently held meetings with Dr. Manmohan Singh, Minister of Finance, Dr. Chitra Naik, Member, Planning Commission, Dr. G. Ram Reddy, Chairman, UGC, Mr. Arvind Kumar, Director, NBT, Dr. Inder Nath Choudhry, Secretary, Sahitya Academi and a number of librarians of key libraries in Delhi. Among the FPBAI's suggestions and demands are the setting up of Book Finance Corporation which would make available low cost finance to the book industry, the development of a National Book Policy, and the denationalisation of textbooks in order that private sector publishing gets an opportunity to develop. The FPBAI expressed concern over paucity of funds owing to which library purchases were at stand still and large payments outstanding. They urged that a special allocation be made during the 8th

Five Year Plan for acquiring books, journals and magazines. Such moves, the Federation believed, would change the face of the Indian Publishing Industry and contribute to intellectual self reliance.

Library Computerization Workshop

The Kelkar Education Trust's V.G. Vaze College of Arts, Science and Commerce, Bombay, proposes to organise a six-day Workshop on Micro CDS/ISIS version 2.3 for the Library professionals in educational institutions, from March 26-31, 1993. The purpose of the workshop is to help modernise college libraries and share the expertise gathered with fellow professionals.

Further details may be had from the Librarian, Vaze College, Mithagar Road, Mulund (East), Bombay-400081.

News from Agricultural Universities

HAU & the Agricultural Scenario in Haryana

As a result of need based and location specific research carried out by the scientists of Chaudhry Charan Singh Haryana Agricultural University, Haryana has witnessed 3 fold increase in production area of major kharif crops. This was disclosed by the Vice-Chancellor Dr. Amrit Lal Chaudhry in Hisar recently.

Dr. Chaudhry said that rice which was not a traditional crop of Haryana till mid sixties, had gained importance as a major kharif crop and its productivity had increased 8 times. Similarly the production of cotton and sugarcane had decreased several times because of the high yielding and disease resistant variety developed by the university experts. With the release of 65 days maturing hybrid bajra HHB 67, the bajra crop in the rainfed area had gained importance as the bajra sowing can now be done as late as middle of August in case of late arrival of monsoon. Research work on development of new hybrids of Soyabean and Sunflower has also been accelerated. Besides development of high yielding and disease resistant varieties of pulses and oilseeds, hybrid seed production programme of bajra, cotton, rice, maize, arhar and oilseeds has been taken up these days so that farmers' requirements for quality seeds are met.

A Rare Gesture

Farmers of Muktsar presented a cheque of Rs. 50,500 to the PAU, Vice-Chancellor, Dr Khem Singh Gill, at a function in recognition of the excellent work done by the PAU on cotton. This has happened for the first time in the history of the university that farmers have taken such a step. Cotton production in Punjab has touched the figure of 24 lakh bales. This is attributed to the research work done by the PAU and the efforts of the farmers of the state.

Research Project for PAU

The university has received a research project under the Indo-French Centre for the Promotion of Advanced Research entitled: "Improvement in the control of anthracnose and powdery mildew diseases of grapevine by rational and need-based use of fungicides". This project will be conducted under the department of plant-pathology with Dr S. S. Sokhi as principal investigator. The project involves a sum of more than Rs. 50 lakh.

Awards & Fellowships

Borlaug Awards Announced

Dr. Amrita Patel, dairy technologist, Prof. Surajit K. Datta, well-known agronomist and Dr. M.V. Rao, Vice-Chancellor of Andhra Pradesh Agricultural University, have been chosen for the prestigious Borlaug award for their outstanding contribution to agriculture.

The award given every year by Coromandel Fertilisers since 1972 is in honour of Nobel Laureate Norman Borlaug, who was associated with the wheat revolution in India.

A committee of eminent persons headed by Dr. M.S. Swaminathan announced the winners of the award for three years 1990, 1991 and 1992.

Dr. Amrita Patel, managing director of the National Dairy Development Board at Anand is the first woman to get the award. She has been commended for her dedicated service through cooperatives of villages to make dairying an instrument of agrarian prosperity and social change.

According to the award committee, Dr. Patel is an ardent conservationist who has provided dynamism to the national tree growers cooperative federation, where she has encouraged farmers to grow species of trees to protect the area against biotic pressure from their domestic livestock and improvident harvesting of the natural biomass, particularly firewood and grass. She is a trustee of the world-wide fund for Nature-India.

Dr. Surajit K. Datta is a versatile agronomist and soil scientist who is presently Director of International Programmes at the Virginia Polytechnic Institute, USA. To him goes the credit of identifying high yield potential and fertiliser responsiveness of IR-8, the very early rice variety developed at the International Rice Research Institute, Manila, which revolutionised rice production in Asia. According to the award committee, he is recogised in international circles as "Mr. Rice" and regarded as the greatest living authority on fertiliser use and management in the tropics.

Dr. M.V. Rao, worked on wheat for three decades providing leadership to the wheat programme as a project director of the all-India wheat research project. He was the first director of the oil seeds technology mission which sought to make India self-sufficient in oil seeds.

The award, consisting of a gold medal, a citation and a cash prize was recently presented at a function held in New Delhi and presided over by Vice-President Shri K.R. Narayanan. The Coromandel lecture was also delivered by internationally renowned economist Prof. Jagdish Bhagwati on the theme "Trade and the Environment: Friends or Foes" on this occasion.

Bhatnagar Awards 1992

Eleven scientists have been awarded the Shanti Swarup Bhatnagar prizes for 1992 for outstanding contributions in engineering and sciences. The awards were presented by the Director General of the Council of Scientific and Industrial Research (CSIR), Dr.S.K. Joshi in New Delhi recently. Six CSIR laboratories also received shields and prizes for technology development on the occasion.

Presenting the awards, Dr. Joshi urged scientists to choose projects that address India's specific problems of energy, bio-diversity, environment and drinking water.

The Bhatnagar prize for biological sciences went to Dr. Dipankar Chatterjee from the Centre for Cellular and Molecular Biology, Hyderabad, and Dr. K. Dharmalingam from Madurai Kamaraj University.

The chemical sciences prize went to Dr. Sumit Bhaduri from the Alchemie Research Centre, Thane, and Dr. S. Ramasesha from the Indian Institute of Science, Bangalore.

Dr. Satish Ramnath Shetye of the National Institute of Oceanography received the prize for earth, atmosphere, and ocean and planetary sciences, Dr. Vivek S. Borkar from the Indian Institute of Science, Bangalore, for engineering science, and Dr. Maithili Sharan from the Indian Institute of Technology, Delhi, for mathematical sciences.

The award for medical sciences was bagged by Dr. M.K. Mehra from the All India Institute of Medical Sciences and Dr. U.N. Das from the Nizam Institute of Medical Sciences, Hyderabad.

Dr. Subodh R. Shenoy from Hyderabad University and Dr. Vikram Kumar from the Solid State Physics Laboratory, Delhi, were awarded the prize for their work in physical sciences.

The CSIR shield for process technology went to the Central Drug Research Institute, Lucknow, for the development of a new female oral contraceptive called centochroman, popularly known as the once-a-week-pill.

The second shield for engineering technology was bagged by the Central Electronics Engineering Research Institute, Pilani, for its electronic control systems for the sugar industry.

The CSIR technology prize for biological sciences was received by Dr. Laljee Singh and Dr. Sridevi Naidu for the Centre for Cellular and Molecular Biology for developing a universal probe for DNA fingerprinting.

The CSIR prize in chemical technology was shared by the Indian Institute of Petroleum, Dehra Dun, for its bimetallic catalyst used in naptha reforming and the Indian Institute of Chemical Technology, Hyderabad, for its sodium-azide production technology.

The prize for engineering technology went to Dr. S.R. Rajagopalan and Dr. Indira Rajagopal of the National Aeronautical Laboratory, Bangalore, for their electrochemical technology for surface engineering. No prize was awarded for medical technology this year.

The Bhatnagar awards, each comprising Rs. 50,000, a memento and a citation, are awarded annually in seven branches of science and technology.

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PILANI (RAJASTHAN) 333031

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Applications are invited for positions of Professors/Associate Professors/Assistant Professors/Lecturers in Engineering (Chemical, Civil, Computer, Electrical & Electronics, Microelectronics Instrumentation, Mechanical), Management, Pharmacy; Biosciences, Chemistry, Economics, Mathematics, Physics; Science & Technology Development, Museum Studies and Information Systems, English, Humanities (Sociology, Philosophy etc.). Young persons who have done outstanding work and who are capable of giving leadership in the above mentioned areas as well as in interdisciplinary areas may be considered for senior positions irrespective of their age.

Positions (full-time/part-time) are available for the Institute's off-campus operations in Bangalore, Bombay, Calcutta, Delhi, Hyderabad, Madras.

Candidates must normally possess a Ph.D. In case of professional disciplines. Master's degree holders will also be considered. They will be permitted to work for Ph.D. degree.

A free booklet **"Introducing BITS to Prospective Faculty"** giving details and prescribed format of application can be obtained on request by sending a pre-stamped (Rs. 8.00) self-addressed envelope (30x25 cm) marked FR/2/92.

This advertisement is valid for **six months** from the date of issue.

PILANI REGISTRAR

News from UGC

Countrywide Classroom Programme

Between 8th January to 14th January, 1993 the following schedule of telecast on higher education through INSAT-1D under the auspices of the University Grants Commission will be observed. The programme is presented in two sets of one hour duration each every day from 1.00 p.m. to 2.00 p.m. and 4.00 p.m. to 5.00 p.m. The programme is avaialble on the TV Network throughout the country

Ist Transmission

1.00 p.m. to 2.00 p.m.

8.1.93

"Origin of Geometry"

"Forensic Documents Examination"

"An Inspiring Era"

9.1.93

"Windsurfing"

"Form an Idea – II"

"The Week Ahead"

10.1.93

No Telecast

11.1.93

"Scintigraphy"

"General Agreement on Trade and Tariff – I"

"Management as a Profession"

12.1.93

"Carbon - The Key to Organic Chemistry"

"Learning to be"

"Trends in Brain Research"

13.1.93

"English for Science & Technology"

"Map Consciousness"

"Histocompatibility Testing in Kidney Transplantation"

14.1.93

"Emerging Trends in Computers"

"I am a Bhil"

"Shelley – The Romantic and the Idealist

IInd Transmission

4.00 p.m. to 5.00 p.m.

7.1.93

"Buried Treasure : Platinum, the element"

"19th Century Russian Literature: Lev Tolstoy"

8.1.93

"Origin of Geometry"

"A Discussion on Secularism"

"Eutrophication"

"Child Psychiatry – III Help your Child"

9.1.93

"Theatre in Society-I Proscenium Theatre"

"The Mughal Miniatures – I"

"The Week Ahead"

10.1.93

No Telecast

11.1.93

"What causes Magnetism?"

"Humming Honey Maker"

"Evolution of Money"

12.1.93

"Molecules and Models"

"Amniocentesis – II"

" AIDS, The Virus"

13.1.93

"Non-Conventional Energy Sources – Solar Energy"

"Orchid Album"

"History of Indian Jewellery – I"

14.1.93

"Buried Treasure : Copper "

"A Writer and His Work"

News from Abroad

Computer Science in Aid of Biodiversity

Scientists at the Australian National University (ANU) are marrying computer science with biological science to provide the most concerted push over to preserve biological diversity both in Australia and overseas.

Databases and specialised software are now being developed at the Australian National University to help scientists identify potential endangered plant and animal species before the survival reaches a critical point.

The project will employ INTERNET, a huge communications web that links together tens of thousands of computers and millions of people from all over the world – by far the biggest computing network on the globe.

The establishment of a new Bioinformatics Facility at the ANU will provide the computer facilities and know-how for the project.

The facility was officially opened in November 1992 as part of the 25th anniversary celebrations of the Research School of Biological sciences

(RSBS) at the ANU. Bioinformatics in the application of information science to the biological sciences – the gathering, manipulation and dissemination of biological information.

One of the staff at the new Facility, Dr David Green, said that in order to protect species diversity, a knowledge of where plants and animals were living and where it is possible for them to live was essential if reintroduction of those species was a goal.

"Ultimately we need to look at not just preventing species and areas from being disturbed but having a more systematic approach and considering the overall maintenance of each species."

Co-ordinator of the new Facility, Professor Adrian Gibbs, said : "Databases are an essential part of the service but it's also the software tools to manipulate it and use it. Many people still haven't caught up with the idea of using computers in their research. This is part of the reason for setting up the Facility, to make the service available and provide a body of expertise."

"A lack of integration is still a problem with many databases," Dr Green said. "In Australia, only two or three of the herbaria are actually on EMail, but people are beginning to realise that they need to communicate."

Dr Green helped set up the Environmental Resources Information Network (ERIN), which gathers data from herbaria and wildlife agencies, on the distribution of plants and animals.

He is now designing systems for the International Organisation for Plant Information (IOPI) which is compiling databases on the distribution of plants around the world.

"Information on biodiversity should be compiled and distributed on the network along the lines of the main genomic database," according to Dr Green.

"Then, with the touch of a button, you can transmit information to anywhere in the world. The way to collate information on biodiversity is via a 'public domain' database. This is a database that anyone, anywhere, can contribute to and use. In that way, you get people all over the world doing the work, rather than just a handful of people at a single centre."

"This 'public domain' approach also eliminates the problems of getting people to share data and cost recovery and resolves the question of who owns the data. Everything is public – you don't submit it unless you are happy with it and you don't use it without waiving all liability."

The Bioinformatics Facility also brings together other facets of the ANU's push into biological information research, notably the DELTA taxonomic database project of Dr Les Watson of RSBS and Dr Mike Dellwitz of CSIRO Entomology.

DELTA is the world's most advanced system for handling information to help identify plants or insects, living or dead. The Facility's DELTA plant virus database has recently become the first component of the world database of all viruses, the ECTVdB.

Another facet of the work at the Bioinformatics Facility is the use of advanced computer graphics to model and analyse the amino acid sequences from which proteins are built.

This work is being led by Dr George Weiller of the ANU's Centre for Molecular Structure and Function, who is modelling virus proteins and Dr Matthew Morrell of the Plant Sciences Cooperative Research Centre, who is modelling Rubisco (the most abundant protein on earth).

Teachers on Top, But.....

Education is the key to economic development, and economic development is China's current priority. A recent survey conducted in China listed 19 occupations and asked people to arrange them in order of the respect in which they were held. Teaching came out on tope. Yet lecturers are increasingly dissatisfied with their lot and parents no longer encourage their children to become teachers.

The reasons for their discontent are primarily financial. Growing foreign investment, and today's doctrine that manufacture and trade are the way to socialist-style wealth and contentment, have begun to pay off for businessmen and farmers, who are happy with the country's progress.

Supplies, formerly meagre, are now abundant, and for the first time in Chinese history peasant farmers are well off. Cramped dwellings are becoming crammed with fridges, colour television sets, fans and new furniture, shops are replacing stall and there is a sprinkling of luxury bungalows complete with garage and new car.

None of this new wealth, however, is finding its way into the pockets of academics, whose salaries have have remained static through the four-year boom.

This is barely enough for food, so lecturers are forced to moonlight. Teachers of English have no problem but many others are suffering real hardship.

Teaching loads are customarily light, so many people work at more than one college and teach evening classes as well. But they deeply resent their poverty, and feel they are having to work ever harder merely to stand economically still.

Some lecturers have doubts about the pressures currently on Chinese people, who have learned over decades to be frugal, to quickly become consumers. And they are deeply concerned about the growing gap between the newly rich and the poor.

In Guilin, in the south, the university has one of the world's most advanced computer installations. In the surrounding fields barefoot men follow wooden ploughs drawn by water buffaloes.

Academics show visitors around in perfect English, then hurry off to catch the bus home.

Previously, civil servants and teachers were forbidden to engage in commerce. Now they are urged to go in for trade. Colleges were formerly funded directly by the government. Now they have to raise half their income themselves, usually by launching projects. Some lecturers are even asked to contribute investment capital from their own savings.

In response to China's current "open door" policy, the country now has more than 12,000 foreign students. A new feature is that they no longer come from a handful of socialist states but from more than 100 countries world-wide many of whose students can afford realistic fees.

Chinese students, who until four years ago were allocated jobs by central government, now have to compete for jobs themselves.

A young graduate of Beijing University, on the other hand, said that he was delighted to be selling ladies' blouses. He is a linguist who has landed a job in the lucrative work of import-export: the golden gate to opportunity in tomorrow's China.

Admission to French Universities

Indian students seeking admission into French universities at the undergraduate level (first cycle), must undergo the formalities of a pre-inscription (provisional enrolment). Pre-inscription forms are available from 1st December 1992 to 15th January 1993 at the : C.E.D.U.S.T., French Centre for University, Scientific and Technical Documentation, Embassy of France, 2, Aurangzeb Road, New Delhi-110001.

Candidates seeking admission into the first cycle will have to undergo a French language test on Wednesday 17th February 1993. For candidates from Delhi, this test will be held at the address given above. For those outside Delhi, it will be held at the *Alliance Francaise* nearest to their place of residence.

Candidates residing in Delhi are requested to collect the forms from C.E.D.U.S.T., while those from outside Delhi are required to make a written request at this Office. The pre-inscription forms will be mailed to them by Registered Post.

Candidates may, however, note that :

(1) For admission into the first cycle of a French university, it is preferable for the candidate to have a Bachelor's Degree. However a candidate with a (10 + 2) may appear for the entrance examination. The university to which he/she applies will decide upon the equivalence to be granted. Any other examination which makes a candidate eligible for university studies in his/her own country is also accepted for the purpose of enrolment.

(2) This procedure does not apply for Engineering studies. Those interested in enrolling themselves for Engineering are required to write directly to the French institution of their choice.

(3) No scholarships are offered at the undergraduate level of studies. Candidates have to meet their own expenses (tuition fee, living expenses, travel, etc.) in foreign currency (roughly 40.000 French Francs per year : equivalent to Rs. 2.2. lakhs).

(4) This procedure is not applicable to candidates with a French "Baccalaureat".

INDIRA GANDHI NATIONAL OPEN UNIVERSITY

Schedule of Telecast for the period 1 January to 31 January 1993
6.30 a.m. to 7.00 a.m.

Date/Day	Academic Prog.	Title of the Course
1.1.93 Friday	General	University with a Difference
4.1.93 Monday	Bachelor's Degree Programme	Unity and Diversity
6.1.93 Wednesday	Computers in Office Management	Office & the Computer I
8.1.93 Friday	Management	Problem Solving
11.1.93 Monday	Bachelor's Degree Programme	Anekta mein Ekta
13.1.93 Wednesday	Computers in Office Management	1. Office & the Computer II 2. Computers & O.R.
15.1.93 Friday	Management	Employees Grievance Handling
18.1.93 Monday	Bachelor's Degree Programme	Double Integration
20.1.93 Wednesday	Lib. & Information Science	1. Birth of Public Libraries 2. Open Channel
22.1.93 Friday	Management	Accounting in Decision Making
25.1.93 Monday	Bachelor's Degree Programme	Dwishah Samakalan
27.1.93 Wednesday	Distance Education	Educational Reforms – The Role of DE
29.1.93 Friday	Management	Management of Technology – Problems and Perspectives

West Zone Youth Festival

The eighth Inter-University West Zone Youth Festival was recently organised at the Bhavnagar University under the auspices of the Association of Indian Universities and the Department of Youth Affairs and Sports, Government of India. Over one thousand artists and official delegates from West Zone's twenty six universities participated in the five-day long festival. Leading artists, intellectuals, co-sponsors and Shri S.Y. Quraishi, Joint Secretary, Department of Youth Affairs and Sports, Ministry of Human Resource Development, Govt. of India, graced the inaugural function.

The function was inaugurated by the noted artist Shri Arvind Trivedi, Member of Parliament, by lighting the traditional ceremonial lamp. Speaking on the occasion Shri S.Y. Quraishi said that he had always been active to promote the spirit of adventure in the programmes such as Youth Festivals. It had been his cardinal aim to promote the spirit of national integration through youth.

The formal inauguration was preceded with a colourful cultural procession as the roads of Bhavnagar witnessed the rhythmic passage of the contestants from various universities dressed in the costumes representing their regional cultures.

The competitions started with the event of Classical Dance. Neha Oza of the host university set the tone with a brilliant Kathak (Jaipur Gharana), a combination of 'Kavitt' and 'Gat Bhav'. This was followed by a number of other Kathak dancers. However the Bharath Natyam presented by Seema Shetty of Bombay University and Geeta Ganeshan of Devi Ahilya Vishwavidyalaya, Indore, stole the limelight. Right postures, essential to this genre of dance were eye-catching in their performance which ultimately got them the first two best positions.

In the Quiz (preliminary) competition fifteen teams participated. Four universities i.e. Bombay, Amravati, Nagpur and Goa were selected for the final contest at which Bombay and Goa universities emerged as the final winners.

Corruption, bribe, frustration, social problems, etc. were the themes of the skit event. The wonder six girls, with their beautiful composition from SNDT Women's University started the programme to present how the young persons who were sincere students had to suffer in a society reeking with the evils. The Marathwada University staged the skit-titled 'Graduate Dog' – a satire on the unemployment of educated young man. The item presented an educated youngman who accepts the job in his utter helplessness of working as a dog with a Pathan who has employed him.

Nineteen universities took part in the 'On the Spot Painting' contest where the topics were 'India of my dream', 'We are one people' and 'A scene of street'. Mohanlal Sukhadia and Poona Universities dominated this solo event.

The events that followed were Mime, Clay Modelling, Rangoli, One Act Plays and Western Vocal Solo. A Mime is ultimately a representation of the inner struggles and perplexities that man experiences during his interaction with the society. SNDT Women's University depicted the Mime theme where an idol appears out of a tree. Their acting and facial expressions were admirable.

The Clay Modelling competition saw eighteen contestants on the topic of human figures, animals, birds and unity. Mostly the artists preferred human figures, though birds and unity as traced by a few also proved to be attractive.

The Light Vocal Solo was one of the most keenly contested events. Participants from different universities presented ghazals, songs and bhajans. Among them the contestants from Shivaji University, Devi Ahilya Vishwavidyalaya, Gujarat University and Bhavnagar University drew repeated applause.

In the One Act Plays section Bombay and Amravati Universities dominated the scene. The Bombay University enacted the story of immortal martyrs who sacrificed their lives for the freedom of the country. Amravati University presented a play in Marathi – 'Eka Bhikha Vachya Chori Cha'. The play was a comedy on the plight of a beggar who is at the same time pitiable and laughable.

Fourteen universities participated in the event of Collage, under Fine Arts. The artists employed materials like flaxen cloth, shreds of earthen lamp-bowls, tooth paste, fevicol, paper pieces, etc. Mohanlal Sukhadia University and Marathwada University were highly appreciated.

In the Group Song (Indian) event twenty three universities participated. Each team was requested to present two songs – one patriotic while another folk. The session broke all linguistic and regional barriers as songs from various languages were presented. SNDT Women's University and Amravati University came out as the final best two entries.

Indira Kala Sangit Vishwavidyalaya, presented the first item of 'Dungari Nritya' (hill dance) of tribal people under the Folk/Tribal Dances event. Shivaji University, presented a social event in dance i.e. worship of 'Khandoba' for the boon of having a child. 'Garba' folk dance was presented by the host university and was unanimously adjudged the best.

The valedictory function was attended by the important personalities of the town and sponsors of the Festival. Prof. G. Bhatt, Vice-Chancellor of the host university congratulated the participants and acknowledged the cooperation of the university staff and students.

The Overall Championship was bagged by the University of Bombay while the Runners up position was claimed by Mohanlal Sukhadia University, Udaipur.

WEST ZONE INTER UNIVERSITY YOUTH FESTIVAL – 1992

RESULTS

A. MUSIC

1. Classical Vocal (Solo)	(1)	Bombay University
	(2)	Rani Durgavati Vishwavidyalaya
2. Classical Instrumental Solo (Non-Percussion)	(1)	M.L. Sukhadia University
	(2)	I.K.S.Vishwavidyalaya, Khairagarh
3. Classical Instrumental (Solo) (Percussion)	(1)	Gujarat University
	(2)	Amravati University
4. Light Vocal (Indian)	(1)	Shivaji University
	(2)	Devi Ahilya Vishwavidyalaya
5. Western (Solo)	(1)	Bombay University
	(2)	Bhavnagar University
6. Group Song (Indian)	(1)	S.N.D.T. Women's University
	(2)	Amravati University
7. Group Song (Western)	(1)	Bombay University
	(2)	Nagpur University

B. DANCE

1. Folk/Tribal Dance	(1)	Bhavnagar University
	(2)	Shivaji University
2. Classical Dance	(1)	Bombay University
	(2)	Devi Ahilya Vishwavidyalaya

C. QUIZ	(1)	Bombay University
	(2)	Goa University

D. THEATRE

(a) One Act Play	(1)	Bombay University,
	(2)	Amravati University
(b) Skits	(1)	S.N.D.T. Womens's University
	(2)	Marathwada University
(c) Mime	(1)	North Gujarat University
	(2)	Rani Durgavati University

E. FINE ARTS

(a) On the Spot Painting	(1)	Bombay University
	(2)	M.L. Sukhadia University
(b) Collage	(1)	M.L. Sukhadia University
	(2)	Marathwada University
(c) Poster Making	(1)	M.L.Sukhadia University
	(2)	Poona University
(d) Clay Modelling	(1)	Vikram University
	(2)	Poona University
(e) Cartooning	(1)	M.L. Sukadia University
	(2)	Jiwaji University
(f) Rangoli	(1)	Banasthali Vidyapith
	(2)	Bhavnagar University

DEBATE	(1)	Vikram University
	(2)	Poona University
	(3)	Saurashtra University
	(4)	Shivaji University
	(5)	Bhavnagar University
PROCESSION	(1)	Banasthali Vidyapith
	(2)	Shivaji University
DISCIPLINE	(1)	Marathavada Agriculture University
	(2)	Sardar Patel University

Overall Championship – **Bombay University**

Runners Up – **M.L. Sukhadia University, Udaipur**

Book Review

Search for an Appropriate System of Financial Management of Universities

G. D. Sharma*

M. M. Sharma. Financial Management of Universities in India. Delhi, Concept Publishing Company, 1992. Pp. 232. Rs. 185

Government policy for marketisation and liberalisation of Indian economy has encouraged many scholars and practitioners to reflect on financing of higher education. Some of them have gone to the extent of suggesting and approving the privatisation of higher education – full cost or almost full cost pricing of education. Some of the states have even started opening capitation fee charging colleges under the pretext of liberalisation. Others strongly suggest that state should provide the resources for maintenance and development of higher education.

The question of financing of universities and colleges is basically a question of political economy. Therefore, answer has to come from the political economy of India. However, what has missed the attention in this debate is the question of financial management of universities. That is to say, how resources are mobilised? How do resources flow from funding agencies to university system? How does university system manage its resources? What is the financial organisational structure? What is the delegation of responsibilities and authorities to financial functionaries? Who takes the final decision? What is the proficiency of persons involved in the financial management? What is the procedure of expenditure and how efficiently resources available with the universities are used? The assumption that resources are scarce, because the supply is scarce is valid to a great extent, yet it is equally valid to say that whatever is supplied is not put to optimum use. There are leakages and wastages in the system which makes this scarce resource further scarce. The book under review attempts to address some of these questions. Therefore, it is a useful contribution in the area of financial management of universities.

The first two chapters deal with the generalities of the problem which may be commonly known. But the third chapter brings out very useful information about management practices in sample universities and institutions. This chapter gives a comparative picture of financial powers and functions delegated to various authorities in the universities and institutions. It also gives the opinion of people regarding delegation of responsibility and authorities. It would have enhanced the quality of this chapter if the author had also deliberated upon the impact of the different kinds of composition of bodies and delegation of powers to functionaries on the efficiency of the management of finances of these universities.

Chapter 4 provides very useful information on allocation and criteria of grants-in-aid and opinion of Finance Officers and Vice-Chancellors about the adequacy or otherwise of grants-in-aid. In this chapter the author also describes the sources of funding for state, central and deemed to be universities. So long as such data are presented university-wise they give a meaningful insight into the sources of funding of sample universities. But when such data are presented by state-wise, because of very small sample and without any kind of projections, the data becomes somewhat queer and methodologically questionable. Nevertheless, one gets the picture of varying nature of data, for example, students fee income ranging from 5 to 50 percent of the total income of universities. Allocation by UGC varying between 98 and less than one percent for deemed universities in Karnataka (98%) and Rajasthan (0.22%). This chapter also gives useful information on views expressed by Vice-Chancellors, Registrars and Finance Officers on the extent of adequacy of grants, funding procedures and delay in release of grants and so on. One-half of the Vice-Chancellors of central universities feel that grant-in-aid is adequate, but only 6 percent of the Vice-Chancellors of state universities feel the same way. According to the remaining Vice-Chancellors it is inadequate. One-third of the Vice-Chancellors of agricultural universities feel that it is inadequate. Therefore, the problem seems to centre around state universities and within it among the general universities. The author has also discussed the new grants-in-aid model. This needs to be considered by funding agencies.

Chapter 5 discusses the pattern of expenditure and financial health of universities in India. This analysis is based on the three years data from 1982–1985. Health is seen only from the point of view of deficit and surplus in university budgets. This is rather limited aspect of financial health of the universities. One has to look into the endowment, capital assets, portfolio allocation and the procedures causing the leakages and the wastages in the system. Nevertheless, limited information towards deficit and surplus of the universities gives useful insight into

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* *Head, Higher Education Unit, National Institute of Educational Planning and Administration, New Delhi-110016.*

financial position of universities.

State-wise analysis again pose the same problem as indicated for analysis of sources of income. Yet it points towards the need for state-wise analysis with adequate number of universities and separately for different types of universities.

Chapter 6 makes suggestions for the long term planning and budgeting system and use of recommended systems of budgeting. Similarly chapters 7 and 8 deal with the accounting, auditing aspects and makes suggestions regarding a new systems of accounting and auditing and point towards future strategies of implementation. These chapters need to be taken seriously by the practitioners and financial managers of universities.

Every university has a budget of more than four to five crores of rupees annually. The budgets of central universities range between Rs. 15-30 crores annually. Such huge amount of resources cannot be efficiently managed unless there is : i) flexible long-term budgeting system; ii) development oriented procedures of auditing and accounting; and iii) professionally trained financial managers. The book is, therefore, first step towards initiating a debate towards effective system of financial management for the universities in India.

CALENDAR OF EVENTS

Proposed Date of the Event	Title	Objective	Name of the Organising Department	Name of the Organising Secretary/ Officer to be Contacted
December 28-30, 1992	All India English Teachers Conference	Theme: Modern Trends in English Literature and New Literatures in English	Indian Association of English Studies	Prof. K.Venkata Reddy Professor of English , Sri Krishnadevaraya University, Anantapur-515003
January 18-29 1993	Programme on Information Storage and Retrieval System	To expose participants to modern methods of information storage and retrieval	National Institute of Small Industry Extension Training (NISIET), Hyderabad	Mr. B. Sambi Reddy, Programme Director, NISIET, Yousufguda, Hyderabad-500045
May 25-27 1993	Sixth Annual Conference of the All India Association for Educational Research	Theme: Research in Educational Management	All India Association for Educational Research in collaboration with St. Ann's College of Education, Mangalore	Dr (Sister) Lydia Fernandes A.C., Principal, St. Ann's College of Education, Managalore
December 14-16, 1993	1993 Annual Conference of the Society for Research into Higher Education	Theme: Governments and the Higher Education Curriculum: Evolving Partnerships	Society for Research into Higher Education, London	P rof. Tony Becher, EDB, University of Sussex Falmer, Brighton BN 1 9RG

THESES OF THE MONTH

A list of Doctoral Theses accepted by Indian Universities

HUMANITIES

Philosophy

1. Bose, Seema. **The existentialist treatment of body with special reference to Sartre, Marcel and Merleau-Ponty.** Delhi.

2. Mangalam, Johns K. **Gandhiji's views on socialism: A critical study.** Calicut. Dr V C Narayana Das, Department of Philosophy, University of Calicut, Calicut.

Religion

1. Laxmi Kumar. **Pali tipitaka mein parilakshita loka jeewan: Ek vishleshnatmak sameeksha.** Delhi.

2. Rizvi, Rani Bano. **Islam mein khavateen kee samaji haiseat.** AMU. Dr S Irtiza Husain, Reader, Department of Shia Theology, Aligarh Muslim University, Aligarh.

3. Verma, Shailendra Kumar. **Emergence and evolution of the Buddha image from its inception to 8th century A D.** Delhi.

Fine Arts

1. Bhagavathi, Y. **Thyagaraja's Nauka Caritramu: A study.** Madras.

Music

1. Harkare, Datatraya Manoharrao. **Ganyog yogsadhna ani sangeet sadhna yatat samadhivasthe kadhe Nenara yog.** Nagpur. Dr Narayan Rao Mangsalkar, Hanuman Road, Sita Bardo, Nagpur.

Performing Arts

1. Sharma, Kaushik Dutta. **The folk culture as identity and defence: A study of selected folk forms including the Shiva cycles and allied traditions.** Rabindra Bharati.

Language & Literature

1. Ashirvadam, K. **The structure of Didayi: An Austro-Asiatic language.** Osmania.

English

1. Abdullatif Dabbagh. **A semiotic analysis of the epic of Gilgamesh.** JNU. Prof H S Gill, Centre for Linguistics and English, Jawaharlal Nehru University, New Delhi.

2. Bhoopathy, M. **Solipsism as leitmotif in the fiction of Philip Roth: A critical study.** Madras.

3. Biswas, Asit Kumar. **R S Crane as a literary critic and critical theorist.** Burdwan. Prof Mohit Kumar Roy, Department of English, University of Burdwan, Burdwan.

4. Chaturvedi, Beena. **The Metamorphosis of the Larva into a Butterfly: A reinterpretation of the imagery in Sylvia Plath's poetry.** Madras.

5. Choubey, Krishna Kumar. **The Hemingway Code: Its evolution and practice.** HS Gour. Dr H S S Bais, Department of English, Dr Hari Singh Gour Vishwavidyalaya, Sagar.

6. Farhathullah, T M. **Testing English at tertiary level: An alternative approach.** Madras.

7. Krishnamoorthy, Mansurabad Kalanathaivelu. **Traditional roots of vision in the novels of R K Narayan and Raja Rao.** Gauhati. Dr Hirendranath Gohain, Prof, Department of English, Gauhati University, Guwahati.

8. Mishra, Rosy. **Nathaniel Hawthorne's treatment of morality in his romances and short stories.** Durgawati. Dr (Smt) S Nair, Principal, Government College of Panagar, Panagar, Distt Jabalpur.

9. Panda, Raj Kishore. **James Baldwin: A study of his novels in American racial perspective.** Utkal.

10. Ramaswamy, Lata. **Shelly and the human mind.** Bangalore. Dr S Ramaswamy, Department of English, Bangalore University, Bangalore.

11. Sinha, Sunil Kumar. **NP-movement in Hindi and English.** CIEFL. Prof K A Jayaseelan, Head, Department of Materials Production, Central Institute of English and Foreign Languages, Hyderabad.

12. Sood, Sarup Chand. **Effect of discourse awareness on reading ability.** JNU. Dr R S Gupta, Centre of Linguistics and English, Jawaharlal Nehru University, New Delhi.

Russian

1. Vijra, Harish Kumar. **Kategoriya Kogezii V Khudozhestvennom na materiale sovremennogo Russkogo yazyka: Funktsionirovanie I Ispol'novanie v linguvisticheskam analize teksta.** CIEFL. Prof J P Dimri, Head, Department of Russian, Central Institute of English and Foreign Languages, Hyderabad.

Sanskrit

1. Bhatt, Smitaben Dhirubhai. **Rampanivadanan rupako.** Patel. Dr A I Thakor, Reader, Department of Sanskrit, Sardar Patel University, Vallabh Vidyanagar.

2. Chakravarty, Shrutidhara. **The impact of Sanskrit grammar on Sanskrit poetics.** Gauhati. Dr Apurba Chand Barthakuria, Prof, Department of Sanskrit, Gauhati University, Guwahati.

3. Kavanal, Reeja B. **Srikrasnavijaya of Sankarakavi: A critical study.** Calicut. Dr C Rajendran, Department of Sanskrit, University of Calicut, Calicut.

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